

McGRAW-HILL SERIES IN EDUCATION
HAROLD BENJAMIN, *Consulting Editor*

PRINCIPLES OF SECONDARY EDUCATION

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Principles of Secondary Education

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PREFACE

This volume is designed primarily as a textbook to be used in the courses designated as Principles of Secondary Education, The High School, Secondary Education, or The Secondary School. It is organized so as to provide for students beginning their professional work a comprehensive picture of the secondary school as it exists in the United States. In addition to the primary purpose of creating a book useful to teachers in training, the authors believe that they have introduced in this volume suggestions and ideas in the light of which active teachers and administrators may evaluate and analyze their present practices and ideas about secondary education.

The authors have purposely refrained from being dogmatic and passing judgment on practices old or new. The hope is that the reader, whether a student in college or an in-service teacher, will receive a fair picture of the present status of secondary education. From this, and by comparison with former practices in this country and current practices abroad, a serious student should be able to develop a fairly clear concept of what the secondary school is, what it is supposed to do, how it approaches its task, and what hope of success it may reasonably have.

An underlying philosophy of education is, at best, extremely intangible and, unfortunately, often built up in fragments, which results in some surprising inconsistencies. In this volume the large facts and principles of secondary education have been treated in a way which is both logical and psychological. An attempt is made to answer such major questions as these: What is the secondary school and what is it trying to do? How is it organized so as to accomplish its purposes? How is the curriculum organized and what modifications in practices seem to be inevitable? What part does the individual teacher play in develop-

ing a program of secondary education? In what direction is secondary education going?

Revision for the third edition of this book was based on the criticisms received from teachers who used it as a text, students who studied it, and on the authors' experience in using it in the classroom. New developments and changes which have taken place in educational practices and thinking since the first editions were published in 1941 and in 1949 have also been stressed. The original framework has been retained, for short periods of time do not make great changes in the general structure of an educational system or in its ultimate aims and goals. They do, however, modify the methods of achieving them.

In the revision, much original material has been replaced by new material based on recent developments in education, and by material judged to be of greater practical value. Greater emphasis has also been placed on the development of guiding principles than in the first editions, but in all cases sufficient factual information to support them has been included.

Wherever possible, descriptions, factual material, and statistics of school systems, as well as educational trends, have been brought up to date. Education moved rapidly during the war and postwar period both in the United States and in other countries. These new developments and trends have been treated in the text if they pertained to or affected secondary education.

The revised manuscript was read critically by graduate and undergraduate students at the University of Arkansas. The authors are indebted to them for valuable suggestions concerning clarification of the text and the treatment of various topics.

RUDYARD K. BENT
HENRY H. KRONENBERG

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EDITOR'S INTRODUCTION

The European secondary school of the nineteenth and early twentieth centuries was restricted mainly to students from upper economic and social levels. It was preparatory to the university and to certain other higher educational institutions, as, for example, officer schools, and attendance at these, too, was a prerogative of the upper classes. Even when secondary schools had been originally established for poor boys, as in numerous cases in England, it was soon learned that "needy" could be interpreted to mean those members of the privileged classes whose incomes were insufficient to support them in a style appropriate to their rank. Even under the impact of the revolutionary events in the first half of the twentieth century, a country like England, in spite of its Education Acts of 1918 and 1944, could still hesitate in carrying out a mandate to democratize secondary education. Its Liberal and Labor governments could plan and organize secondary schools for "all" children, but the people were still inclined to believe that "all" really meant only all who had minds of secondary-school caliber.

The American nineteenth-century secondary school broke rather abruptly with this class tradition. By 1900, while the European *gymnasium*, *lycée*, *collège*, or "public school" continued to charge tuition fees, the American high school had developed a nominally free system of education between the eight-year elementary school and the four-year college. The European secondary school remained socially and economically snobbish, even while most fervently reciting the formulas of liberty, equality, and fraternity. The American secondary school struck out boldly on the course of becoming an instrument of democracy, even when that democracy was still denied to many potential high-school pupils because of color, race, place of residence, or economic disability.

From this beginning the secondary school has come a long way.

In certain respects it has indeed become more like its European contemporaries. In its junior high school, senior high school, and junior college divisions, it now covers the standard European secondary age range from eleven or twelve to nineteen or twenty. Unfortunately, moreover, it has developed a practice of imposing hidden costs of attendance which still keep some children of the lower economic levels from its doors.

At the same time, many secondary schools in Europe, Asia, and South America are becoming somewhat more like United States high schools. Although the most common type of secondary school in the world, outside of the United States, is a school patterned after the French *lycée*, the influence of the American concept of secondary education has risen steadily in the twentieth century, particularly since the close of the Second World War.

The main reason for this increasing influence of the American secondary-school idea in other parts of the world is the dramatic insistence of the American people on having a system of public education for all the youth of their country. There are still some people in the United States who think that reading, writing, arithmetic, and respect for established institutions are all that need to be learned by the children of the masses who should be at work by the ages of twelve or fourteen. There are still great inadequacies in our system of secondary education; there are still many inequalities of educational opportunity on the secondary as well as on the elementary and higher levels. The simple fact remains, however, that the people of the United States, in overwhelming majority, believe in secondary education for every young citizen of the Republic, without regard to race, religion, color, economic status, or even intelligence level. They have moved forward on this belief through the hell of depression and the high water of war. They will continue on this road, and nobody is going to stop them.

This third edition of what has become a widely used and standard textbook tells how the Americans got that way with respect to their secondary schools. In clear, well-documented presentation, it gives the principles of secondary education and illustrates them with facts from the swift current of recent educational history.

The high quality of the first and second editions has been maintained and improved. In simple but impressive fashion, the authors have used

their wealth of experience and scholarship to help give prospective secondary-school teachers the understanding and vision needed for service to a great country in what may well be the more crucial half of this colorful and rugged twentieth century.

HAROLD BENJAMIN

I

SECONDARY EDUCATION IN THE UNITED STATES

The high school is America's educational contribution to the world. There is no other institution like it. It has been called "the great American experiment," "the greatest of all inventions," and "the people's college." It was established without precedent, was an untried institution, and was the first attempt of any people to provide secondary education for all at public expense. In all cities, in practically all towns, and in many rural villages of the United States, one will find a high school which is one of the major community enterprises. If one could view the nation as a whole at any time school is in session, he would see about 6,600,000 boys and girls traveling to or from these schools from all types of homes, representing all types of vocations and all degrees of social and economic levels.

These schools are established, maintained, and supported because the people have faith in them. This faith has been shown in many ways, but the main one is the extent to which parents send their children to them and vote taxes to support them. This faith has had a steady increase, especially in the last 100 years, and has been paralleled by increased enrollments which doubled every 10-year period from 1880 to 1930.

After 1930, enrollments continued to increase until 1940, after which they declined somewhat because of the Second World War and because of the drop in the birth rate in the early 1930's. Beginning about 1950, they started increasing again.

Because of this faith in secondary education, the American people have set for themselves certain definite goals involving secondary schooling for youth. Three of the major ones which indicate America's philosophy of education are:

1. To make secondary education available to every boy and girl in the United States regardless of social and economic status, race, nationality, political affiliation, or religious belief.
2. To make the high school a tuition-free public school, supported by taxes and separated from religious organizations in administration and curriculum.
3. To provide curricula which will be congruous with the needs, interests, and capacities of the boys and girls who attend the high school.

Only a democracy could have such goals. They represent educational ideals the fulfillment of which should make the state a better place in which to live. To accomplish these goals, an enormous financial outlay is required to construct buildings, transport pupils, and train and pay teachers, but the task, which would have been considered impossible a few decades ago, is gradually being accomplished. The goals have not been reached, but much progress has been made toward doing so. In all probability, they will be extended before they are reached. The extent to which these goals have been reached, the place and purpose of a secondary school in a democracy, and the difficulties and problems involved in making secondary education available for all American youth are the matters receiving major emphasis in this volume.

It is the purpose of this chapter to present briefly the scope of the entire educational program in the United States, with special consideration of the secondary school in order to show its relationship to the other educational divisions and agencies. Many of the topics discussed in this chapter will be treated in greater detail in later sections. The treatment given in this introduction is for the purpose of orientation in the study of this great American institution.

Divisions of our public-school system. The educational system in the United States is conveniently divided into three divisions, elementary, secondary, and higher. For all general purposes, the elementary school may be defined as including grades 1 through 6; the secondary school, grades 7 through 14; and higher education, all schooling beyond the secondary level. There are exceptions to this classification by grades. In those school systems organized on the 8-4 plan, the seventh and eighth grades are included in the elementary division, while grades 9 through 12 are considered as secondary. In recent years, the community college and the junior college have been included in the

secondary division, although the same two years beyond the high school are not so classified if the work is pursued in a university or college. Thus it may be seen that the term "secondary education" is broader and more inclusive than the term "high school." The traditional four-year high school is only one of the educational institutions on the secondary level.

What is secondary education? Classifying the school system according to grades does not tell one what secondary education is. The division by grades is convenient in referring to various levels of work, but it does not indicate the subjects being pursued, the ages of the pupils, or the aims and functions of the institution. In a final analysis, any level of our educational ladder must be defined in terms of the aims and functions agreed upon for that division. The secondary school cannot be considered as a preparatory school for college, for that is only one of its functions, nor is it sufficient to describe secondary education as any schooling received between the elementary school and college even though it does serve as a connecting link between the two.

Secondary education has been defined in terms of any schooling given at certain chronological ages. Some say it includes the ages from 14 to 18, others from 12 to 20, while still others say it includes all schooling of adolescents. In the former definition, there is no agreement as to what ages to include, and the latter does not clearly define secondary education because adolescence is not a sharply divided period with fixed limits. It may be defined on the basis of the subjects taught. The elementary school gives instruction in the fundamentals and tools which are essential in solving everyday problems of life, while in secondary education one explores various fields of knowledge and acquires further tools for the solution of problems or as preparation for advanced learning. Higher education is thought of as giving advanced technological and professional training or advanced and specialized study in the fields of science, literature, and the arts.

From this discussion, it can be seen that it is impossible to define secondary education strictly in terms of age, grade, or the subjects being taught, but it must be defined partly by these and also in terms of the aims and functions of the school. The extremes involve no difficulty. There is no doubt that the third grade is not in the secondary school and that the eleventh grade is not in the elementary school.

It is the transition grades near the end of one division and the beginning of the next which are difficult to define. The junior high school is neither wholly elementary nor wholly secondary at any point in its three years. It is a composite of both. The junior high school closes the elementary school, serves as a transition school, and starts the secondary school. The junior college is likewise a composite of both secondary and higher education.

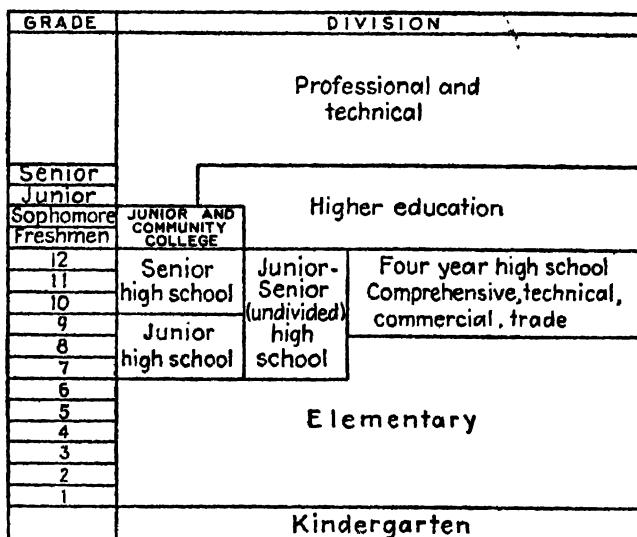


FIG. 1. The secondary-school system in the United States in relation to elementary and higher education.

For convenience in this treatment of the subject, secondary education will be considered as including the junior and senior high schools, the regular high school, and the junior college, or grades 7 through 14. In Fig. 1, the relation between the secondary school and the other educational divisions is illustrated diagrammatically.

Faith of the American people in secondary education. The rapid growth of the secondary school in the past few decades and the unparalleled enrollment at the present time reveal America's faith in the institution. From 1890 to 1953-54 the public-high-school enrollment increased from 202,963 to 6,582,300 and the number of schools from 2,526 to 23,746 (see Figs. 2 and 3).

This is an indication of the extent to which the masses of people are eager to raise their standard of living, to increase their cultural level, and to satisfy their desire for knowledge. It is quite common to hear

the expression, "The strength of a democracy lies in the number of educated citizenry." Regardless of the extent to which this claim is advocated by educational leaders, the secondary school would not long be supported at public expense if those who attended did not

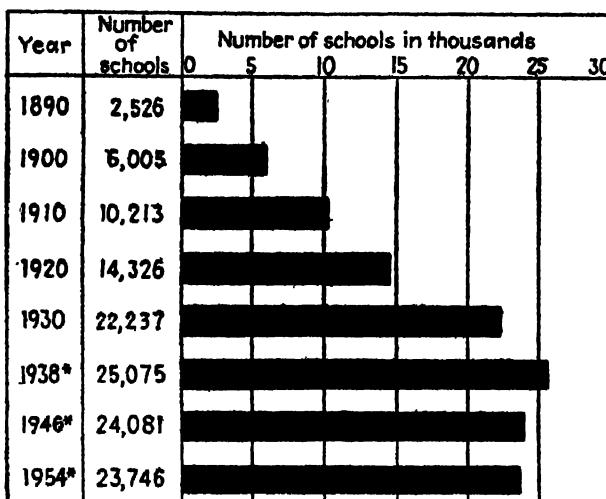


FIG. 2. Growth of the public high school in the United States from 1890 to 1954. (Biennial Survey of Education, 1934-36, U.S. Office of Education Bulletin 2, 1937, p. 4. *Data from U.S. Office of Education, October, 1954.)

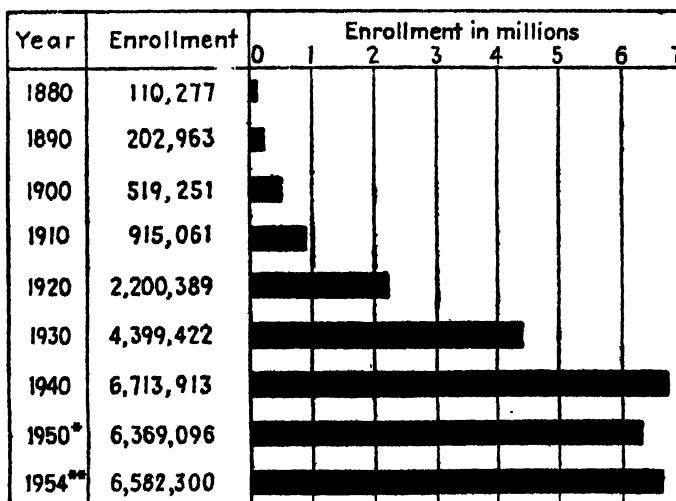


FIG. 3. Growth in enrollment of the high school from 1880 to 1954. Data are for the upper four years only. [Drawn from data presented in Statistics of Public High Schools, 1937-38, U.S. Office of Education Bulletin 2, 1940, p. 20. *From Walter H. Gaumnitz, High School Retention, *School Life*, 35 (February, 1953), pp. 69-70. **U.S. Office of Education, October, 1954.]

maintain a faith that the experience was profitable. Evidence of this is found in the fact that practically all classes of people regard the right to free public education through the secondary school as one of their heritages.

The following are ways in which the people have shown their faith in secondary education:

1. Early establishment of schools. After the Colonists arrived in this country and had established homes and churches, they soon set up elementary and secondary schools.
2. Enactment of school laws. Hundreds of school laws have been enacted making school establishment, support, and attendance mandatory. Although the compulsory ages for many years included elementary pupils only, the present trend is toward raising the legal leaving age to include students of secondary age.
3. Increase of school expenditure. For many years, school expenditures have shown an increase, resulting in increased and improved educational facilities.
4. Increase in school terms. The average school term for both elementary and secondary schools increased from 6½ months in 1870 to 9 months in 1954. Some cities have 10-month school terms.
5. Support from corporations and private interests. Private interest has been shown by the number of outstanding leaders who have championed the cause of education and by many grants and gifts to the schools by individuals and by corporations.
6. Statements of leaders regarding education. Statements from leaders such as Jefferson, Madison, Lincoln, and T. Roosevelt all affirm the value of public education.
7. Statements of organizations regarding the value of education. Organizations such as the National Congress of Parents and Teachers, the American Legion, churches, patriotic organizations, chambers of commerce, and labor groups have repeatedly affirmed the value of education. The first two organizations sponsor National Education Week.
8. Statements of law on the importance of education. Notable examples of these are to be found in Judge Cooley's decision in the Kalamazoo case and in the Massachusetts school laws of 1647 and 1827.

Our educational progress has been described as a series of battles dealing with such issues as compulsory education, tax-supported schools, state control and supervision, the extension of the school system, the establishment of the high school, state aid to support edu-

cation, and Federal aid for the support of public education. Many of these battles are still being fought, especially the last, which, if won, will help in equalizing educational costs and opportunities.

There is a tendency for the American people to identify education with the work of the school, and as a consequence the faith they have in education becomes a faith in the school. Many consider the school as the only road to culture.

Types of secondary schools. There is no uniform type of secondary school in the United States, for no one type meets the needs of all youth. All types are similar in many respects, and there are features common to all. At the same time they vary according to organization, curriculum, control, and support.

According to organization, one type is that commonly referred to as the regular high school, or the 8-4 type, that is, eight years of elementary and four years of secondary education. This division included 42.8 per cent of all high schools in 1954 (Table 1). For many years,

*Table 1. Number of High Schools of Various Types in the United States and the Percentage of Pupils Enrolled in Each Type, 1954**

<i>Type of school</i>	<i>Number of schools</i>	<i>Per cent of schools</i>
Junior high schools.....	3,227	(13.7)
Senior high schools.....	1,760	(7.3)
Undivided, junior-senior.....	8,591	(36.2)
Total reorganized.....	13,578	57.2
Regular high schools.....	10,168	42.8
Total public schools.....	23,746	100.0
Private high schools.....	3,331	
Total public and private...	27,077	

* Data from U.S. Office of Education, October, 1954.

this was the most common type, but, since 1946, reorganizations have proceeded so rapidly that, since 1950, regular high schools are no longer the most common type.

The most popular types are those known as the 6-3-3 and the 6-6,

commonly referred to as reorganized schools. In 1954, 56.2 per cent of all public high schools were reorganized. In the 6-3-3 type, the first six grades are in the elementary division, the next three are organized separately as junior high schools, and the last three as senior high schools, while those organized as undivided junior-senior high schools are described as belonging to the 6-6 plan. Besides these divisions, which include the majority of all reorganized schools, there are several combinations, as the 6-2-4, and those including junior or community colleges, as the 6-6-2 and the 6-4-4 plans. The last is being advocated by many educators as ideal for a national system. It includes a six-year elementary school, a second unit of four grades usually called the junior high school, and a third unit of four years referred to as the junior college, or the senior high school. The secondary division begins with the seventh and terminates with the fourteenth grade. The lower unit, according to Sexson, is not a typical junior high school, nor is the upper unit a typical junior college.¹ A number of school systems are operating on this plan. Among them are those of Pasadena and Ventura, Calif.; Moberly and Jefferson City, Mo.; and Parsons, Kan.²

Types of schools according to the curriculum include the comprehensive, vocational, trade, commercial, and technical high schools. The technical high schools are designed for those who desire more vocational training than is commonly given in the regular public schools. The comprehensive high school which includes a wide variety of subjects and general, classical, vocational, and college-preparatory courses is the predominating type in the United States. It is one of the democratic features of our system that no sharp separation is made between vocational and cultural education.

Whether a school is public or private is determined by the nature of the control and support. Those schools controlled and supported by religious denominations, by institutions, or by private organizations and which charge a tuition fee are known as private schools as contrasted with those which are supported and controlled by the public. There were 3,331 private and parochial schools in the United States

¹ John A. Sexson, *A New Type of Secondary School*, *Bulletin of the Department of Secondary School Principals*, 22 (February, 1938), pp. 1-11.

² Leonard V. Koos, "Integrating High School and College," pp. 5-8, Harper & Brothers, New York, 1946.

in 1954, with an estimated enrollment of 774,800 pupils, or about 8 per cent of the total secondary-school population.

There are a few private schools established as business enterprises which are supported by fees. Others are direct descendants of the Latin grammar school, being over 100 years old. Many universities maintain high schools as training schools for prospective teachers. These may be considered as semipublic in that they usually charge an enrollment fee, have the major part of the expense borne by the state, and may or may not limit their enrollment by certain selective techniques.

Although the private schools do not deviate markedly from the public schools in aims and functions, they are relatively free from state supervision in formulating their own courses of study. They are supervised and inspected only for the purpose of being accredited for transfer of students to other high schools or to institutions of higher learning and to see that they conform to state educational laws which affect all secondary schools of the state.

The extension of secondary education. The secondary school has been extended upward to include at least two additional years of secondary education and, in some cases, three or even four years. These schools are known as junior colleges and community colleges, which are usually two-year schools. They were established to meet the needs of those who desired schooling beyond the twelfth grade but who did not wish to attend institutions of higher learning or those who wished to attend college nearer home as long as possible and then transfer to the senior-college division.

The junior and the community college are secondary schools, but they have elements of both the secondary schools and institutions of higher learning. They are transition schools for those who transfer to the senior-college division, designed to improve articulation between the two divisions. For those who do not intend to continue their schooling, they provide terminal education.

The development, aims, growth, and present status of the junior college and the community college are presented in Chap. 6.

DEMOCRATIC FEATURES OF THE HIGH SCHOOL

The high school has many democratic features, far more than secondary schools of other countries. It is unique in that it is a tuition-

free school supported by the public and is open to all regardless of socioeconomic status, nationality, race, creed, or sex. Although the majority of all high schools are coeducational, there are a few for boys only or girls only, located in various cities of the nation. Our school system has attracted the attention of educators in Europe, who criticize us, saying that we lower our standards when we extend secondary education to the masses in order that less capable pupils may pass through and that we place too little emphasis on scholarship. There is an element of truth in the criticism, but it must be recalled that the primary aim of our secondary schools is citizenship and social efficiency, while that of Europe is erudition. Americans do not want their children excluded because they receive low ratings in scholarship. The aims of the American secondary school are broad, general, and flexible. Since it is a new institution, established in a new country, it is not dominated by tradition and conservatism as are the secondary schools in some countries. The curriculum is broad. Many different subjects are offered, designed to give a general training to all classes of people. Although vocational education is included in the program, the general aim of social efficiency is still paramount.

Other democratic features which are peculiar to the American secondary school are:

1. The school system of the United States has less centralization of authority and control and more local initiative than school systems of other countries.
2. Pupils are admitted to the secondary school on the basis of the completion of the elementary school, without any impediments such as examinations, high class standing, or social position.
3. Each division is sequentially related to the others. Gradually the gaps between divisions are closing so that eventually the system will constitute an educational ladder with the change from any one grade to the next at one stage of progress no different from or greater than that at another. Likewise, marked changes in methods of instruction, in discipline, and in the curriculum are gradually being eliminated. This has been accomplished to such an extent that in few educational systems outside of the United States is the elementary division so sequentially related to the secondary school.
4. The typical high school in the United States is the comprehensive school. This is in sharp contrast to those which have a parallel system separating the various types of courses, such as the general, cultural, classical,

and vocational. The American system houses the various courses together, makes transfer from one to the other easy, and offers a large variety of electives. Exceptions to this are found in urban centers, where separate vocational, trade, and commercial schools have been established in addition to the comprehensive type, and in rural schools which are so small that they are unable to offer more than the required number of units for graduation and college entrance.

5. More activities are to be found in American schools than in those of any nation in the world. They have found a definite place in the curriculum and are one of the outstanding characteristics of our system.
6. The public high school is independent of all religious groups and does not teach the doctrines of any creed, religion, class, or political party.

Growth of democratic features. The immediate ancestor of the American high school was the academy, which was itself preceded by the Latin grammar school. Each of these schools was established to meet the needs of the times, and each, after serving its purpose, declined in favor of a more democratic institution. As changes occurred in all fields of human activity, the Latin grammar school and the academy did not keep pace and as a result the high school was established to take their places.

It must not be assumed that the Latin grammar school and academy never met the needs of their times, for they provided secondary education for a small group while the masses were evolving an educational philosophy. They were transition schools. Their faults were that their curricula became outworn and that the basic philosophy on which they were established remained constant while that of the people developed. Furthermore, they frequently were supported by tuition fees. Schools reflect the basic social and political philosophy of a people and are instruments for inculcating these established principles. Any school that is to live through the ages and continue to render a service to society must have a dynamic rather than a static curriculum and keep pace with educational and social theory.

The settlers in America were familiar with the traditional secondary schools of Europe, and many had attended grammar schools. Although grammar schools were being criticized for their formalities, nevertheless they were introduced in America. "At that time Latin was not used in Protestant services, the Vulgate Bible had been dethroned, and English theology was flowing in the channel of the mother tongue.

Nevertheless, the notion that all ministers should know Latin had still some centuries of tough life in it.”⁸

The first attempt to establish a Latin grammar school was made in Virginia in 1621 by private endeavor and private resources. It was brought to an end the following year by Indian massacres. The first permanent school to be established was in Boston in 1635, and it was known by such names as *free school*, *Latin school*, or *Latin grammar school*.

We are indebted to the Latin grammar school for keeping learning alive and continuing the growth of the secondary school. It laid the foundation for a newer and more progressive school. It served its purpose for the classes while the masses were evolving a philosophy of and a desire for secondary education. New conceptions of education were being felt in America, and Latin schools stimulated rather than retarded the growth of a more democratic school, the academy.

The factors causing the decline of the Latin grammar school paralleled those giving rise to the academy. Of many causes for the rise of the academy in America, the chief ones were:

1. The common people desired and needed more than elementary education.
2. The commercial class desired a practical education.
3. The hardships of frontier life and a literary cultural education seemed inconsistent.
4. People began to demand educational facilities available near their homes.

Contrasted with the Latin grammar school, the academies were popular, but even they were unpopular in many respects. They were looked upon as being exclusive, snobbish, and undemocratic because they were not accessible to all who wished to attend, charged a tuition, and often were not publicly controlled. In many sections, especially in Massachusetts, the idea of education being privately controlled was not popular. It did not meet the real needs of the people, nor was it in keeping with a growing idea that schools should be provided for all without direct cost to the individual. The academy did not fulfill this ideal. It was public in that it was usually incorporated under state

⁸ Ellwood P. Cubberley, “The History of Education,” p. 362, Houghton Mifflin Company, Boston, 1920.

laws, but it was considered private because it charged fees and was administered through private or church organizations.

In 1825, there were about 2,500 academies; in 1850, when the type had reached its highest development, there were 6,085 academies enrolling 263,096 pupils.⁴ After the Civil War, when the high school started growing, it was really a transformed academy maintained at public expense.

With the rise of the public high school, some of the academies disappeared, others became high schools or normal schools, and others evolved into colleges and universities, while still others are in existence today. Those still operating have as their main purpose that of preparation for college.

The academy was well adapted to the needs of its time. It was a transition school in the advance toward a system of free public education which was being developed. It met for a long time the liberal demands of those who were opposed to the Latin grammar school, and it was a foundation for achieving the next institution—the high school. The contributions of the academy were in liberalizing secondary education, bringing educational facilities within the reach of greater numbers, meeting the needs of those desiring a practical training, functioning as a college-preparatory institution, providing secondary education for girls, and providing some teacher education.

The education of girls. During the Colonial period, little provision was made for the education of girls beyond that of an elementary education in reading, writing, and some arithmetic. It was believed that a girl's place was in the home and that her brains were too delicate for higher education. Girls attended the "dame schools," the elementary schools after they were developed, and the private schools. In some of the Latin grammar schools, girls were given instruction in special classes after the boys were dismissed. They also attended writing classes from three to five o'clock, two days a week. The girls paid fees for these extra classes. The effect of this exclusion is evidenced by the fact that for a great part of the eighteenth century not more than 25 per cent of the women who had occasion to sign legal documents were able to do so.

The academy was the first secondary school to provide for girls,

⁴ I. L. Kandel, "History of Secondary Education," pp. 418-422, Houghton Mifflin Company, Boston, 1930.

although for 25 years after the Revolutionary War the type of education given girls was criticized on the grounds that it was too much of the "finishing-school" type and that it resulted in "showy" accomplishments rather than true learning. The schools stressed painting on velvet, wax-flower work, and types of ornamental work but did not stress academic subjects.

Mrs. Emma Willard, who championed the cause of education for girls and who criticized the former type, opened the Troy Female Seminary in New York in 1821 with private and public assistance. She introduced subjects in principles of student government and training in morals and religion, literary, domestic, and ornamental subjects as well as courses for teaching. Catherine Beecher opened a school in Hartford in 1822, and the Misses Z. P. Grant and Mary Lyon became associated with the establishment of Ipswich Female Seminary in 1828.⁶

The first female high school was organized in New York through the influence of John Griscom in 1826, although it was not until 1840 that the high school became coeducational. This principle was adopted more for the sake of economy than because of any educational theory. Today, 50 per cent of the high-school population is girls, and most of the universities are coeducational although the men outnumber the women in the ratio of about 3 to 1.

Separate schools for Negroes in Southern states. Although public secondary schools are available to and open to Negroes in all states, separate schools are maintained for them in the Southern states. The segregation is by state laws and until recently has affected all divisions of the school system.

There is a tendency toward removing the segregation practice, beginning at the college and graduate-school levels. In several states, Arkansas, Kentucky, Louisiana, Missouri, Oklahoma, and Texas, Negroes are now admitted to graduate schools of the public colleges and universities and to some private schools and to some undergraduate divisions and professional schools in which equal instruction is not provided in schools for Negroes within the state.

Maintaining equal educational facilities for Negroes, a requirement which has been upheld by Federal courts in the past, imposes a heavier financial burden than would be necessary if segregation were abolished.

On May 17, 1954, the Supreme Court declared that the doctrine of

⁶ *Ibid.*, p. 517.

"separate but equal" facilities has no place in the field of education and that "separate educational facilities are inherently unequal," in its ruling that segregation was unconstitutional.⁶ Since that decision was announced, schools have been making plans for the future which are congruous with the Supreme Court decision.

Comparison of the high school with secondary schools of Europe with respect to democratic features. A large number of the democratic features of the high school were not found in secondary schools of Europe in the past. Their function was to serve the elite, not the masses of the people, they did not practice coeducation save in a few places for economy, and boys seldom attended classes with girls. Their curricula were classical, academic, and literary, and although there were a number of free places for capable boys who could not afford to pay the fees, most students were forced to pay them.

Although there is a tendency to broaden the term, secondary education is still given a narrower meaning in many European schools than in the United States. It has been limited to include only that kind of training given to young people to prepare them for advanced study in some institution of higher learning. The schools are often limited to a few select pupils, and many of them above the elementary school are not considered secondary.

The influence of American educational principles on other countries. From a study of the trends in secondary education in other countries, a tendency is noted to reorganize the schools on more democratic principles than in the past. Progress has been slow, for the countries are strongly committed to the idea that secondary education is a class privilege and that the curriculum should be classical. Gradually, opportunities are being granted to capable students to secure a secondary education by the reduction or elimination of fees; greater articulation between elementary and secondary schools is being produced; the elementary preparatory schools for the classes are being eliminated; and the curricula are becoming more modern.

Since the Second World War, the trends in countries outside the United States have been definitely toward greater democratization. Secondary schools are being made accessible to more youth by lower-

⁶ *College and University Bulletin* 6 (May 15 and June 1, 1954), National Education Association, p. 2, and *National Education Association News*, 8 (May 21, 1954), p. 1.

ing or eliminating tuition fees and by providing aid to worthy youth unable to finance their own schooling. Class distinctions, which had long been a barrier to many, are being broken down so that schools are open to those of all social levels. Schools are also being made available to both sexes, and the distinction between types of secondary schools is being eliminated. Other democratic trends are:

1. To delay as much as possible the child's decision about his later career.
2. To make the transition from one type of parallel course to another much easier.
3. To incorporate the technical and vocational schools more closely into the general school system.
4. To raise the age of regular compulsory school attendance by one or two years and require some kind of continuation schooling until about the age of eighteen.

Thus, secondary education is becoming broader and is assuming some of the features of the universality desired for primary education.

These trends are general and, in some places, represent goals rather than actual practice. Many difficulties stand in the way of their immediate execution, such as breaking down tradition, providing facilities, financing an extended program, and training an adequate supply of teachers. Specific examples of various countries will be presented in Chap. 15.

SIZES OF THE VARIOUS HIGH SCHOOLS

The American people have always wanted their schools near their homes. They have wanted them to be within easy traveling distance and have taken a local pride in having the school in one of the most conspicuous places in the community, whether it was the best place in which to locate the school or not. Local control and local initiative have always been desired, and a school too far from home would not permit either. When problems in the school have arisen, the parents have always considered it a right and duty to give them personal attention. Further, it is not possible to transport pupils too far, nor do parents wish to board their children away from home. These are a few of the reasons the majority of all high schools are small, 55.4 per cent of them enrolling fewer than 200 pupils (Table 2). They range in size from fewer than 10 pupils to over 10,000. In 1930, over 60 per cent of the schools enrolled fewer than 100 pupils, but since that time

*Table 2. Sizes of the Various High Schools in the United States According to Enrollment**

<i>Enrollment</i>	<i>Number</i>	<i>Per cent</i>	<i>Cumulative per cent</i>
0- 9	184	0.8	0.8
10- 24	640	2.7	3.5
25- 49	1,896	8.0	11.5
50- 74	2,311	9.7	21.2
75- 99	2,068	8.8	30.0
100- 199	6,025	25.4	55.4
200- 299	3,103	13.0	68.4
300- 499	3,106	13.1	81.5
500- 999	2,757	11.6	93.1
1,000-2,499	1,536	6.5	99.6
2,500 or more	102	0.4	100.0
Total.....	23,746	100.0	

* Data from U.S. Office of Education, October, 1954.

consolidations have reduced the percentage to 30 which is a good indication of improvement.

Although the maximum size of a high school for economy and efficiency is debatable, there is considerable agreement as to the minimum. A high school employing fewer than 12 teachers cannot be adequately staffed, for this number is required in order to provide for adequate administration and supervision and enough classroom teachers to support a program sufficiently broad and varied to meet individual needs and differences. A school staffed with 12 teachers can enroll 300 or more pupils as easily as fewer and still retain a pupil-teacher ratio of less than 30 to 1, which is near the national average. A school of this size will also assure greater economy as determined by the annual cost per pupil enrolled. On the other hand, the large high school came into existence because of the rapidly increased enrollments in urban areas, which have crowded and congested many buildings originally designed for fewer pupils.

The optimum size of a high school cannot be definitely stated in terms of numbers, although some educators have suggested an enroll-

ment of about 600. Factors such as geographic conditions affecting transportation, the amount of space available for buildings, school activities, and the type of curriculum will determine how large a school can be and continue to maintain efficiency in administration and instruction.

THE SECONDARY-SCHOOL POPULATION

Secondary-school enrollments. It is estimated that for the school term 1954-55, there were 6,582,300 pupils enrolled in the upper four

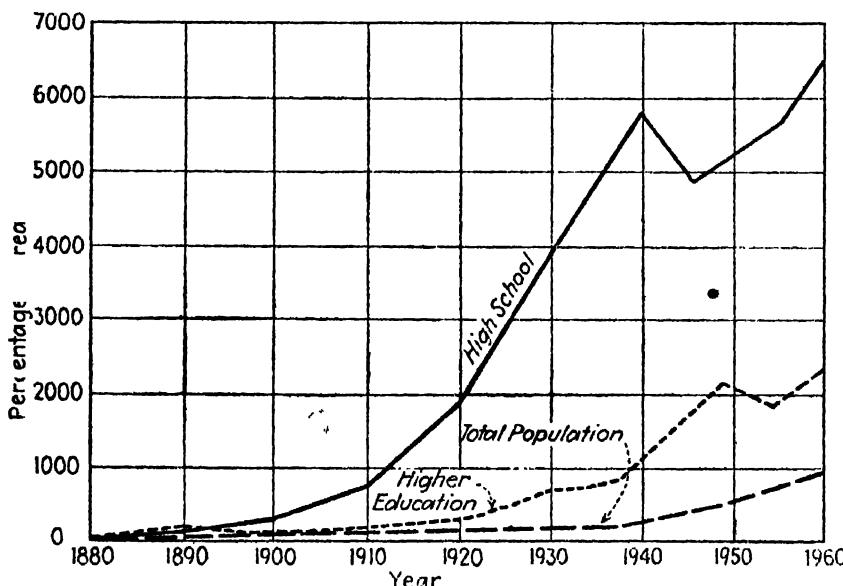


FIG. 4. Percentage of increase of the secondary-school population as compared with that of higher education and the total population of the United States from 1880 to 1960. (Data secured from Grayson N. Kefauver, Victor H. Noll, and C. Elwood Drake, *The Secondary School Population*, National Survey of Secondary Education, Monograph 4, U.S. Office of Education Bulletin 17, 1932, and from Fig. 3.)

years of the public secondary schools of the United States (Fig. 3). In 1880, there were only 110,227 pupils enrolled in this division. The increase since then has been over 5,000 per cent, with the highest enrollment being attained in 1940 (Fig. 4).

From 1940 to 1950, there was some decrease in enrollment because of the Second World War and because of the low birth rate during the early depression years. Since 1935, the birth rate has risen sharply, and

the result has been a big increase in children in school. The rise in the birth rate is now being reflected in high-school enrollments, which have shown a rise. The current enrollment in high schools is now about what it was in 1940, and all indications are that it will rise to a considerable extent in the next few years and then level off (see Table 3).

*Table 3. Population 14 to 17 Years and Secondary-school Enrollment from 1890 to 1960 **

Year	Population 14 to 17 years of age	Number enrolled in school	Ratio of high-school enrollment to population 14 to 17 years of age
1890	5,354,653	357,813	7
1900	6,152,231	695,903	11
1910	7,220,298	1,111,393	15
1920	7,735,841	2,495,676	32
1930	9,341,221	4,799,867	51
1940	9,720,419	7,113,292	73
1950	8,303,000	6,240,000	75
1960	11,000,000	9,800,000	82

* Vitalizing Secondary Education, *U.S. Office of Education Bulletin*, 3, 1951, p. 4; and Toby Oxtoby, Robert Mugge, and Deal Wolfe, Enrollment and Graduation Trends: From Grade School to Ph.D., *School and Society*, 76 (October, 1952), pp. 225-231.

It is estimated that about 75 per cent of the potential secondary-school population was enrolled in 1953-54. Although this is the average percentage enrollment in secondary schools for the nation as a whole, there are great variations in local communities, states, and sections of the country. In some communities, practically all pupils between the ages of 14 and 17 are actually enrolled in school, while in others, especially in rural sections, the figure may be as low as only 50 per cent. In 1952, the state of California enrolled 89 per cent of the potential population,⁷ and at the other extreme the average for several Southern states was 54 per cent.

It will be some time before the Southern states enroll a high percentage of the potential population. These states have accepted goals as

⁷ Walter H. Gaumnitz, High School Retention, *School Life*, 35 (February, 1953), pp. 69-70.

high as in other sections, but because they have a smaller proportion of the nation's wealth and are rural states, they are unable to advance so rapidly.

Trends in high-school enrollment. The rapid increase in the high-school enrollments could not be expected to continue indefinitely.

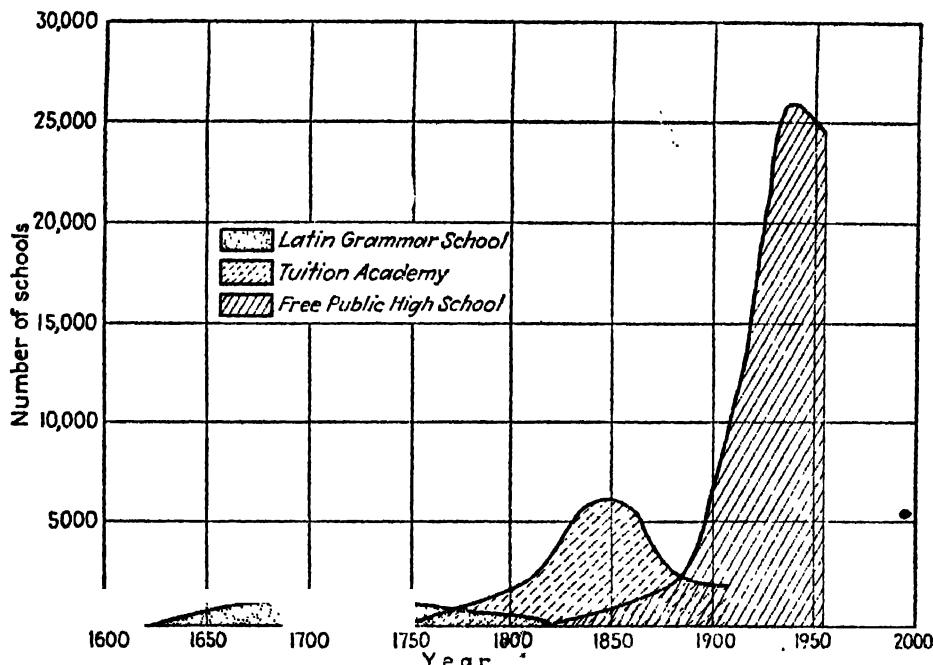


FIG. 5. Development of secondary schools in America from 1635 to 1954. (After E. P. Cubberley, "Public Education in the United States," p. 192, Houghton Mifflin Company, Boston, 1919. Extended by the authors from data given in Fig. 2.)

The decrease in the rate of growth of the secondary-school population is to be expected, for the saturation point is being approached. After about 1955, secondary-school enrollments should increase much more rapidly, because by that time the increased number of children born during the period 1940-42 will be near 11 million, and if the percentage enrollment increases to 80 or 85, one may expect over 9 million students enrolled in secondary schools between the ages of 14 and 17.

Selectivity of the secondary-school population. Although still selective, the high school is becoming a less selective institution. It would be natural to expect that the increased enrollments would change the

character of the total school population. Because of the nature of the curriculum and the inaccessibility of schools, only those who could afford to attend, from a financial point of view, or were planning to attend college pursued secondary-school curricula in the past. Studies have shown that these pupils were better than average in mental ability and were somewhat homogeneous with respect to vocational intentions; that is, most of them were intending to pursue the professions. The increase in the enrollment brought into the school a less homogeneous group with respect to interests, capacities, and vocational intentions, and the average mental ability decreased although it is still above the average for the general population.

Causes of the increased enrollments of the secondary school. The increased faith in education is one of the primary causes for the increased enrollment in the secondary school. After 1880, when the legal status of the high school as a free public institution became established, the enrollment started increasing. As the enrollment increased, the curriculum was changed to meet the needs, interests, and abilities of the heterogeneous population. This had a reciprocal influence, for the enriched and broadened curriculum was not only a result of increased enrollment but also a cause of attracting still more pupils and further increasing the confidence of the general public in the institution.⁸

Other factors that were influential in causing an increase in the secondary-school enrollment were:

1. *Increased Urban Population.* In rural areas, schools were not accessible to many who wished to attend while they had been established in urban centers. As the urban population increased at the expense of the rural, an influx of pupils in the public schools was a result.

2. *Improved Methods of Transportation.* Schools could not be accessible nor were consolidations possible until roads were built and methods of transportation improved.

3. *Increased Leisure.* The machine age brought shorter working hours and increased leisure for educational pursuits.

4. *Improved Child-labor and Compulsory School-attendance Laws.* Improved child-labor laws naturally followed a machine age and increased leisure. Combined with a growing faith in education, these

⁸ Leonard V. Koos, "The American Secondary School," p. 13, Ginn & Company, Boston, 1927.

factors led to the enactment of compulsory school laws and the extension of the upper age limit of others. Early compulsory school laws did not extend beyond the leaving ages of the elementary school; but in 1948 the maximum compulsory school-attendance age was 18 in 7 states, 17 in 2 states, 16 in 36 states, 15 in 2 states, and 14 in 1 state.⁹ Since the average age for the ninth grade is about 14 years, all states save 1 extend the compulsory school attendance beyond the age for high-school entrance and 9 states to the age at which the average pupil graduates from high school. However, these attendance laws do not hold all pupils in school to these ages, for many states specify either attainment of a certain age or completion of the eighth grade before one may leave school or that work permits will be given after the eighth grade is completed.

5. Desire for Increased Culture. A desire to increase the cultural level of the nation and a belief that this attainment depends upon attendance at school have caused many to turn to the secondary school purely for cultural purposes.

Enrollment in the various sizes and types of high schools. Although the majority of high schools have low enrollments, the majority of pupils attend schools with enrollments of over 200. This is obvious from the fact that there are many schools with enrollments of 1,000 or over and that it would require many of the small schools to equal the enrollment of one large one. Thus almost half of all high schools were established in order to make it possible for a relatively few pupils to have the advantage of a secondary education.

*Table 4. Approximate Percentage of Pupils Enrolled in High Schools of Various Sizes **

<i>Size of School</i>	<i>Percentage Enrollment</i>	
0- 99		5
100- 499		22
500- 999		29
1,000-2,499		37
2,500 and over		7

* Computed from data presented in Table 2.

⁹ The Legal Status of the Public School Pupil, *Research Bulletin of the National Education Association*, 1948, Washington, D.C., p. 13.

Reorganized schools are now the predominating type and enroll the majority of pupils. This was true when reorganized schools were the minority type since they tended to be in the large centers of population.

Enrollment by sex. The American secondary school is unique in that both sexes are represented and the schools are coeducational, although there are several high schools for boys and for girls only. The percentage of boys and girls enrolled is about equal. For several years in the past, the percentage of boys was less than 50 because of the fact that many quit school for military service or to seek employment. The larger number of girls was also due to the fact that they had a greater interest in the courses of study than boys, and although they found phases of their studies uninteresting, they continued to attend while the boys dropped out. The percentage of girls increases to the senior year, and more girls than boys graduate. The recent increase in the number of boys is at least partial evidence that curriculum revisions and the reorganization of the schools are factors in making them more attractive to boys.

The popularity of athletics and an enriched program of activities, as well as the introduction of more vocational courses, have been chief factors in improving the school's holding power.

Intelligence of high-school pupils. The average intelligence quotient of all secondary-school pupils is about 102, revealing that the secondary-school population is nearly representative of the general population. There is some variation in this among different schools, and there are differences among curricular groups of the same school. Because the average is near 100, it should not be concluded that the secondary school is no longer an intellectually selective institution. In some sections in which the percentage of the potential high-school population enrolled in school is low, the secondary school is still to some extent a selective institution, while in those sections in which a high percentage is enrolled the high school becomes less selective and the population is almost a cross section of the general population. These percentages indicate the enrollment only but do not reveal the holding power. The average I.Q. of seniors is higher than that of freshmen, indicating that the less intelligent withdraw before graduation in greater numbers than those of higher I.Q.'s.

Classes of people represented. The secondary school has shown a tendency toward greater democratization, not only with respect to abilities, but also with respect to classes of people represented. Formerly the high school was populated almost entirely by those of the professional classes and those in comfortable circumstances. Today, the laboring classes are taking advantage of public high schools, which is one factor causing the large increase in the enrollment. There are exceptions to this. In some communities, it is still the prevailing idea that the secondary school is only for those of the so-called upper classes, and although those of the laboring or lower classes are not excluded, in many obvious ways they are shown that they are misfits and out of place. The curriculum is made narrow and follows college-preparatory or classical patterns, and standards are elevated in order to make the school uninteresting and difficult so as to exclude those not wanted. In some sections, pupils of the laboring classes and nonresident pupils are not accepted socially by their classmates. They are barred from various activities and are not given a sympathetic welcome by the teachers, which has a tendency to discourage a prolonged stay in the high school.

The authors have observed evidences of this in urban schools enrolling those from rural areas, who found it difficult to be "accepted" or to become members of "the gang." Likewise, transient children often find social barriers, mainly because they did not grow up with the others. This situation is not general, and such tendencies are fast disappearing, for as demonstrated by the decline of the academy, the American people will not long permit any marked undemocratic tendencies in the school system.

The high school as a democratizing agency. In the United States with its heterogeneous population, national unity and integration can be achieved only through the operation of social and economic institutions. The secondary school is only one of these institutions. The church, home, press, radio, and cinema all may be considered as educational agencies affecting the lives of American youth. It is a part of the national program to inculcate democratic principles in order to perpetuate the nation and its institutions. In this capacity, the secondary school is one of the greatest democratizing agencies in existence. The elementary school accomplishes this to a great extent, but there the emphasis is placed upon the acquisition of tools of learning, and it is in the secondary school that these tools are employed to gain an understanding of

social and economic institutions which have been developed and which should be perpetuated.

The high school receives pupils of both sexes, of various religious denominations, and makes no distinction between those of varying social and economic levels. When they enter the high school, they are a heterogeneous group with respect to attitudes, ideals, and prejudices. When they leave, they are usually more like-minded than when they entered. This, perhaps, is more of an ideal than an actual accomplishment; but it is safe to say that if the secondary school has not achieved this aim at least in part, secondary education for the masses cannot be justified.

Articulation between the divisions of the school system. Articulation in our school system means the bringing together of the various parts to form a unified whole. Although the various divisions have different aims and functions and are organized separately, the divisions should be so united that pupils may pass through the entire system without being handicapped through faulty administration, techniques of teaching, or curriculum. They should not experience any sudden gaps which must be bridged before further progress can be made. Ideally, there should be no more difficulty in passing from grade 8 to 9 or from high school to college than from grade 3 to 4. Although this has not been wholly achieved, much progress has been made through curriculum planning, better grade placement of pupils, the introduction of reorganized schools, and more adequate guidance and counseling programs.

Problems in extending secondary education to all youth. Extending secondary education to all youth has not been an easy task, for many problems had to be solved and many obstacles overcome. One of the major difficulties is that of financing the enterprise. The cost of constructing and equipping secondary-school buildings and employing teachers has been a problem since the beginning of secondary education. Past, and many present, methods of financing have resulted in gross inequalities in educational opportunities and high costs to some taxpayers. Districts, counties, and states vary in their abilities to support secondary education. The district system accentuates these differences since each one includes a small area. Larger administrative units and newer methods of securing revenue are needed reforms in equalizing educational opportunities for all the youth. Supporting secondary education should not be a burden to any taxpayer. The costs should be

equalized, and every youth in America should have an equal opportunity to secure a secondary education which is designed to meet his individual needs and capacities.

Another major problem is that of educating sufficient teachers to provide a qualified one in each classroom. Inadequate salaries in some sections have tended to draw young people to other vocations, causing a shortage and a large turnover of teachers. This problem, as well as that of constructing buildings, has been acute since 1950 because of the rapidly increasing enrollments following the higher birth rates during the period 1935 to 1950.

Other problems are those of holding pupils in school longer, determining their needs, planning curricula to meet their needs, and providing facilities for them in health, transportation, libraries, lunches, recreation, work experience, and guidance.

These as well as others are continuing problems. As changes occur, present and past methods will have to be modified and new solutions found to old problems. Furthermore, changes bring new problems which must be met.

Principles and their implications derived from the preceding discussion. Principles are statements which may act as guides in reorganizing and in improving secondary schools. They are not rules or laws which must be rigidly followed, but since they represent the best educational thinking based on facts and investigations, they should be followed as far as local conditions and circumstances permit.

From this description of the secondary schools in the United States, the following principles may be derived. Each is followed by an implication.

1. Secondary education is best defined in terms of its aims and functions; therefore, these aims and functions should be known and an effort made to achieve them.

2. Secondary schools should be made available to every youth in the United States; therefore, schools should be established in every school district and transportation provided for those living more than a walking distance from the school. The curriculum should provide for the needs of all ranges in ability, for all variations in interests, and for all fundamental needs.

3. The American people have shown faith in the secondary school; therefore, the school should continually strive to merit it by being of service to all youth.

4. One type of school cannot provide for the needs of all youth; therefore, many types of schools with different curricula should be provided, as determined by local needs.
5. The secondary school is a democratic school and a democratizing agency; therefore, it should receive students of both sexes and all religious beliefs, nationalities, races, and economic and social levels and teach all the American way of life.
6. Extremely small and extremely large high schools should be avoided; therefore, each community should determine the optimum size of school for maximum efficiency and, through consolidations and divisions of large schools, strive for this optimum size.
7. The three divisions of our school system should be articulated; therefore, the entire system should be graded so that progress from one grade to another or one division to another should be regular and orderly.

Relation of this to subsequent chapters. This chapter had as its aim that of orienting one in the study of the American secondary school. It attempted to reveal the scope and the magnitude of the enterprise and give a cross section or general picture of the school and its importance in this country. This general survey has shown that the American people have established educational goals including the extension of secondary education to the masses at public expense regardless of race, sex, or creed; the democratic features of the high school as compared with the Latin grammar school, the academy, and schools of other countries; and a large number of small schools to make educational opportunities available to all youth. The questions which most logically follow are, "Why have secondary schools been established?" and "What are their uses to society?" These questions will be answered in subsequent chapters.

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2

PURPOSES OF SECONDARY EDUCATION

It is quite evident that the majority of people of the United States want secondary education for all youth, as shown by the extent to which schools have been established. The high school was not forced upon the people by a minority group. If it had been it would not have been supported and could never have had the most rapid growth any educational institution has ever had.

The Latin grammar school and the academy are examples of institutions which, for a time, served a purpose; but neither met the needs of the majority of the people, and both have practically disappeared. Since 1825, we have extended the franchise to all people over twenty-one, and we have had increasing amounts of participation in and knowledge of public affairs by all people. The result has been a demand for a type of education different from that provided by earlier institutions, and the high school has been developed by the people to provide the kind of education desired.

Civilization and schools. While living in a primitive or very simple state, man did not need schools. In such a state, man's needs were simple and few, and the training of youth could well be accomplished in the home, or incidentally through his own observations and experiences. As civilization became more and more complex, as institutions were developed to supply man's needs, as cooperation between groups extended, the period of infancy was extended and the school, as an institution, developed. At first, only elementary schools were necessary, especially for the masses who needed only the fundamental principles of reading, writing, and arithmetic. Education beyond elementary was for the training of leaders, but as society became more complex, secondary education became an essential for everyone.

The people of the United States could get along without secondary education for all youth, as evidenced by the fact that for many years they did. They could get along in the same manner as they could do without electricity, but they could not live so well or improve their present way of life.

Generally speaking, the need for secondary education was felt before it was expressed in definite terms. Although a need or desire preceded the establishment of schools, the actual expression of aims often followed rather than preceded the establishment of schools. Many Latin grammar schools were established to prepare boys for college when there were no colleges available, and many high-school graduates, a few decades ago when it was considered by many as primarily a college-preparatory school, never attended college. For various reasons, the values of secondary schooling have been carefully examined and expressed in the form of aims, or objectives. The general aims have remained more constant than the specific aims. There are some things society has always wanted, such as good citizens, but the characteristics of a good citizen, how such a status may best be achieved, and the role of the school in achieving this are phases of this general aim which undergo constant changes.

Value of aims. Without definite aims and purposes, secondary education would be chaotic rather than orderly. It would be impossible to formulate any guiding principles of method or curriculum construction. The aims give direction to all activities and enable one to answer such questions as "What is the purpose of secondary education?" "Who should attend?" "What activities should be provided?" "How can secondary education be evaluated?"

Many criticisms have been made of the high school by those who are not familiar with the aims and purposes of the institution, as, for example, that too many youth are attending high schools, including many who are not displaying a great amount of scholarship in certain formal subjects, honored because of long tradition. This criticism would not be made if the true aims were known. Erudition or scholarship is not the primary aim of the high school, although many insist that it should be stressed more.

Incidental or false reasons advanced for establishing high schools. Many parents, teachers, and others have voiced aims which are not sound or are merely incidental. These have often been detrimental

to the welfare of the school, for the claims could not be justified. Some false or incidental aims of secondary schools are:

1. *To Make More Money.* Incomes of various groups, when compared with the amount of schooling obtained, show an increase with schooling. This is often interpreted to mean that if one goes to high school he is assured of increasing his income. The fallacy of the claim is in assuming that high-school attendance is the cause of the better incomes; actually, since the school was and is to some extent a selective institution, many of those who attended would have earned more anyhow. Many parents who have sent their children to high school for this purpose have been disappointed.

2. *To Elevate Social and Vocational Position.* High-school graduates do occupy positions of a higher social and vocational level, or hold more of the so-called "white-collar" jobs; but, again, they do so because of superior ability, and not primarily because they went to high school. Since the high-school population is increasing and the number of higher positions is remaining about the same, a lower percentage of high-school pupils can secure them.

3. *To Develop Mental Power through Formal Discipline.* The doctrine of formal discipline has almost been discarded, but it is still considered valid by many persons, especially those who wish to retain the study of such subjects as Latin, formal grammar, and algebra in the high school and do not know that they have other values which are valid. This doctrine is a direct influence of the Latin grammar school, but its beginnings extend back to a much earlier date.

The disciplinary concept can be traced back to Plato, whose idea was to train the mind so that pupils could think in the world of ideas, or engage in abstract thinking. Disciplinary training might be along physical as well as mental lines, such as training in physical endurance or training in moral fields to conquer desires and develop the will. Formal discipline does not always represent a conscious theory developed in the past but is a term ordinarily used to denote a type of training. When schools were attacked because of their formality, schoolmen advanced the disciplinary theory.

In attempting to apply the writings of Locke to education and the management of children, the Puritans came to some unusual conclusions. In his writings, they found support for the ideas that free ex-

pression should be suppressed, the will should be brought into subjection, and the body should be made to endure hardship. They further interpreted Locke to say that play should be stopped and that children should be forced to engage in activities that were difficult and unpleasant.

This strong influence of the early Puritans and educational leaders caused formal discipline to have more influence in the eighteenth and nineteenth centuries than any other doctrine. The concept is founded upon faculty psychology, which holds that the mind is composed of distinct faculties, each capable of being trained and of operating in any field. The emphasis is placed upon general, rather than specific, training. According to this doctrine, the curriculum should contain a few well-selected subjects which, if they are to train the mind, must be difficult. Emphasis is placed on method rather than content, on the theoretical rather than the practical, and on effort rather than interest. The subject must be organized logically, rather than pedagogically, and no attempt must be made to adapt it to child nature. Proponents of this doctrine believe in extreme training in habit formation, in drill, and in much rote memory work even if it is not understood.

These ideas characterized the Latin grammar-school leaders and continued with modification until the twentieth century. As new subjects were proposed, they were criticized on the ground that they had no disciplinary value, while old subjects, such as formal grammar and Latin, were retained because of the traditional belief in their disciplinary value. It was not until the twentieth century that this theory was discredited and the curriculum of the secondary school began to be built on practical needs and pupil interests. Even today, much school practice implies a belief in mental discipline.

4. *Knowledge for Knowledge's Sake.* Briggs, in discussing the getting of knowledge for the sake of knowledge, shows the absurdity of the phrase by substituting any other word for "knowledge." He remarks, "Only an erratic would collect bathtubs for the sake of bathtubs or doorknobs for the sake of doorknobs."¹ Pursuit of knowledge

¹ Thomas H. Briggs, J. P. Leonard, and Joseph Justman, "Secondary Education," rev. ed., p. 351. By permission of The Macmillan Company, publishers, New York, 1950.

is always motivated by some force other than the knowledge itself, as utility, beauty, curiosity, or a desire to excel, rather than for the sake of some subject.

Many of these statements given as the purposes of secondary education are not entirely invalid. They are incidental or secondary to the primary purposes. If these were the chief purposes, it is doubtful that the secondary school would continue to be supported.

Before presenting the true aims of public secondary education, the basis of educational aims will be given, followed by the aims of other schools.

THE BASIS OF EDUCATIONAL AIMs

Educational aims are social aims which have been selected by the schools. All educational aims are social; but all social aims are not educational, for the schools do not accept all social aims.

Changing aims of schools. Since educational aims are social aims, as society changes the aims must change, be redefined, or at least shifted in emphasis. Aims of schools are expressions of what society wants. Among the things they have always wanted are good citizens; but what constitutes a good citizen in one state or generation does not necessarily do so in another. If perpetuation of the state and its institutions is what is wanted, the schools must constantly change their aims, for institutions themselves are constantly undergoing transformation.

Characteristics of good educational aims. The school as an institution cannot accept some needs of society as aims. Wesley gives four principles for determining objectives: (1) they must have the approval of society or at least some articulate groups; (2) they must be susceptible of being achieved through instruction; (3) they must suggest activities that are within the capacities of the school population; and (4) they must be actually accepted and undertaken by the school. Aims which fail to meet these conditions may be objectives of society, but are not educational objectives.²

Since educational aims express the sentiment and needs of society, public education will not long be supported if society does not ap-

² Edgar Bruce Wesley, "Teaching the Social Studies," rev. ed., pp. 118-119, D. C. Heath and Company, Boston, 1950.

prove of them, nor can they go far ahead of or lag far behind society. Often a minority pressure group makes demands, and educators must decide whether the demand is of the entire group or of only a small part.

If the objective cannot be achieved in the school, it is not valid even though it might be a good social objective. The school at best has many artificial features, and what is taught in school, to be of value, must function outside school. Under these conditions, some things cannot be accomplished by the school regardless of how desirable they may be. Furthermore, if the objectives are not within the capacities of the pupil, little can be accomplished toward achieving them. More objectives are proposed than accepted, because they do not fall under these four characteristics of educational aims. The actual choice of the objectives requires evaluation and judgment on the part of those who formulate them.

A social aim may not be accepted by the schools as an educational aim, so long as the objective is attained better by some other agency. As long as the home was the best agency for making persons worthy home members, and the church the best for developing ethical character, the schools did not accept these as objectives. Changes in the home and church, together with social changes, required that they become educational objectives. Consumer education and safety education are recently accepted educational aims. To an extent, these were referred to schools by society with some reluctance on the part of the schools to accept them. The school should not be too eager to accept every task referred to it.

Educational aims should be definitely and functionally stated. Vague generalizations are of little value. To say merely that "the secondary school is a social institution designed to meet certain basic needs of society" is too general, for it does not answer the question, "What needs?" Likewise, "exploring the various fields of knowledge" is too indefinite, for it does not give a clue to the fields which should be explored. "To pass on the cultural heritage," if given as an aim, raises the question at once, "What is the cultural heritage?" "To perpetuate the state and its institutions" implies that all state institutions should be perpetuated without change. Again, if the schools are to prepare citizens, then what constitutes a good citizen must be determined if the aim is more than a general statement which has little meaning.

Who formulates educational aims? Until a need of society or a sufficiently large group has become definite or articulate, it cannot become an aim. When it does, educators or committees formulate it into aims. It requires keen insight into human activities and a study and analysis of society as a whole, and of the individuals composing society, to determine what the objectives should be. Even then they might not be accepted, and many which are proposed are not accepted. Minority groups are always desiring to use the schools as instruments to perpetuate a principle, cause, doctrine, or belief or to bring about a social or economic reform. The schools are instruments of all the people, not small groups.

Ultimate and immediate objectives. The two chief types of objective are known as ultimate, or general, and immediate, or specific. The former are what is eventually expected as an outcome, while the latter will determine the specific activities for achieving these general outcomes. Immediate objectives are usually divided into three classes: (1) factual information, knowledge, principles, and rules; (2) skills, habits, and techniques; and (3) attitudes, appreciations, interests, and ideals. For example, citizenship is an ultimate aim, but respect for law and a knowledge of the constitution are immediate aims. Aims cannot be taught as abstractions; they must be broken down into specific outcomes which can be achieved through proper activities in the school.

AIMS OF CERTAIN SECONDARY SCHOOLS COMPARED

Aims of secondary schools making provision for the classes may be and usually are different from those which serve the masses. Those which served the classes as the Latin grammar school, the academies to a great extent, and the schools of Europe place greater emphasis on scholarship and preparation for higher institutions than they do on practical or utilitarian values.

Aims of the Latin grammar school. The aim of the Latin grammar school was preparation for college, with emphasis on mental discipline and moral training. Even this stated aim was not wholly accurate, for many who attended the Latin grammar school did not attend college, and as the Colonial period advanced, more than college preparation was demanded. The aims of grammar schools established in various parts of America were about the same. According to the Massachusetts

law of 1647, the grammar schools were established to prepare for college "that learning may not be buried in the grave of our fathers in the Church and Commonwealth." In Maryland, schools were established for the training of young men "for the service of God, in Church and Commonwealth."

Frequently the aims of various schools are reflected or stated in school laws, for needs of society, expressed as aims, are often the basis of legislation. Excellent examples are the Massachusetts school ordinances of 1642, requiring pupils to be taught to read so that they could receive religious instruction and read the civil laws, and the "Old Deluder Satan Act" of 1647. These two acts were of importance, for they were the first laws of their kind in America and the first state intervention in education. Some excerpts from the Old Deluder Satan Act are:⁸

It being one of the chief projects of that old deluder Satan to keep men from the knowledge of the Scriptures, as in former times by keeping them in an unknown tongue—that learning may not be buried in the grave of our fathers in the Church and Commonwealth, the Lord assisting our endeavors: It is therefore ordered that every township in this jurisdiction of 50 householders shall then forthwith appoint one within their town to teach all children as shall resort to him to write and read, whose wages shall be paid either by the parents or masters of such children, or by the inhabitants in general—It is further ordered, that when any town shall increase to the number of one hundred families or householders, they shall set up a grammar school, the master thereof being able to instruct youth, so far as they may be fitted for the university; provided, that if any town neglect the performance hereof above one year, that every such town shall pay five pounds to the next school until they shall perform this order.

The law was ahead of its time and was difficult if not impossible to enforce. Many towns preferred to pay the fines rather than to establish the grammar schools, although about thirty-five schools were established in New England by 1700. The law did not consider different times and conditions and a changing frontier as colonists spread out by moving westward. Seybolt has shown that the Latin grammar school was never popular with large groups in the population and that many attended private schools offering subjects considered more

⁸ I. L. Kandel, "History of Secondary Education," p. 120, Houghton Mifflin Company, Boston, 1930.

immediately valuable.⁴ The fact that Massachusetts laws of 1671, 1683, 1701, and 1718 successively raised the penalties for failure to establish grammar schools further indicated that the public was not convinced of the value of secondary education. W. H. Small⁵ has summarized the attitude toward the Latin school in these words:

The grammar school was not a popular institution: it was conceived, supported, and perpetuated by the few; its extension was slow; its course in most towns was erratic; and yet, considering all the struggle of this period, it was a marvelous institution, the bed rock of future educational systems.

Aims of the academies. The leaders of the academy movement had a broad concept of the purpose of secondary education. *

Benjamin Franklin's aim was: ⁶

The good education of youth has been esteemed by wise men of all ages as the surest foundation of the happiness of private families and of commonwealths. Almost all governments have therefore made it a principal object of their attention to establish and endow with proper revenues such seminaries of learning as might supply the succeeding age with men qualified to serve the public with honor to themselves and to their country.

The aim of the Phillips academies (1778) was "the great aim and real business of living." Just what constituted this was not definitely stated before the analysis of individuals after the Civil War (see Table 5).

Aims of the schools of Europe. Secondary schools of Europe, still largely for the classes, have aims which are less practical or utilitarian. In England, they stress character training, scholarship, and formal mental training. In France, general culture and mental training are primary, while, in Germany, German culture and service to the state are the chief aims. In Russia, the aims are definitely those for the good of society, with secondary-school courses made as practical as possible.

⁴ R. F. Seybolt, *The Private School, Source Studies in American Colonial Education, Bulletin 28*, Bureau of Educational Research, College of Education, University of Illinois, Urbana, Ill., 1925.

⁵ W. H. Small, "Early New England Schools," p. 31, Ginn & Company, Boston, 1914.

⁶ Quoted in Kandel, *op. cit.*, pp. 170-171.

Table 5. *Aims, Objectives, and Social Background of the Latin Grammar School, Academy, and High School for Various Periods**

Period	School	Objectives	Social background
Colonization to the Revolution	Latin grammar	Ultimate: preparation for the ministry Immediate: preparation for college	Stratified society Education in classics Boys from privileged classes destined for leadership Narrow field of human knowledge
Revolution to the Civil War	Academies	Ultimate: preparation for life Immediate: varied to fit each school Specific: preparation for a life activity: Military training Teacher training Commercial training College-preparatory training "Fitting and finishing"	Society still stratified, but no longer dominated by one class Increasingly complex society Growing importance of the middle class and their increasing demands for an education
1820 to 1860	High schools	Ultimate: "complete living" Immediate: "eminence in his profession" Classical course prepared for college Aims generalized and vague	Flood of immigrants from 1835 to 1850 Improving transportation and communication Rise of science as a subject of study
Civil War to 1900	High schools	Ultimate: preparation for life Immediate: no marked agreement Generalized objectives show tendency to break up into specific ones Aims for each curriculum	Growth of democratic feeling and its demands for education of all children of all people Sharp rise in the high-school population
1912 to 1925	High schools	The analysis group Ultimate: successful living Immediate: varied with the point of view of the educator The project group Ultimate: "Live more abundantly" Immediate: in terms of health, citizenship, recreation, vocational efficiency, and moral adjustment	Democracy growing Increasing complexity of life All classes aspiring to full human opportunities Small institutions growing large Multiplying human interdependencies Increased specialization Great growth of vocational movement

* L. A. Williams, "The Making of High School Curricula," pp. 76-77, Ginn & Company, Boston, 1928.

In the United States, the aims are balanced between society and the individual as paramount. The most usual single aim given is that of citizenship, meaning preparation for life in a democracy.

The aims of secondary education in France. One aim of secondary education in France is to promote and preserve general culture, which serves at the same time as a *culture d'esprit*, which has no exact English equivalent. The French also stress their national culture, which stands for "logic in thought and expression of principles in command of details, for the ability to reflect and reason."⁷ Their chief emphasis is upon quality rather than quantity. The aims are achieved through the study of the classics, which give power to use abstract ideas, and in general studies, to cultivate judgment, taste, appreciation, and the ability to think clearly and logically. The study of foreign cultures is designed to give a better appreciation of French and to develop a command of their own language. According to *Instructions* on the secondary-school course:⁸

It is not the function of secondary education to prepare pupils who have a definite profession in mind, nor even to point them toward one or the other of the great intellectual routes in which the activities of man deploy themselves. It does something more and better; its task is, without preparing for anything specific, to make the pupils apt for everything.

The aims of secondary education in Germany. In Germany, schools are instruments of the state. The authorities believe that the purpose of the secondary school is to educate the physically and mentally outstanding youths in a manner that will enable them to take an active part in the shaping of the political, cultural, and economic life of the nation. Between the world wars the subjects were taught to support Nazi doctrines of racial and national superiority. The *Gymnasium* was allowed to continue its linguistic-mathematical curriculum if it did not defy the Nazi veto of scientific inquiry in the field of biology, social science, and philosophy. Every urban secondary-school student gave one year of service to the farmers; while at the university he served half a year in work camps, and all males and females were

⁷ Sidney B. Hull, *Differences in French and American Secondary Education*, *School Review*, 39 (May, 1931), pp. 372-382.

⁸ Quoted in Kandel, *op. cit.*, p. 219.

compelled to accept conscription for one year of military duty.⁹ The schools were used as instruments of propaganda and for training leaders for the state. The German view was that a citizen has duties but no rights and that one of his chief duties is to serve the state.

Much of the educational philosophy of the past has been carried over to the present, especially in the insistence on a close relationship between education and the environment. The aims are toward the great national tasks set before both men and women, and to prepare for these, great emphasis is placed on activity and character rather than the imparting of a given amount of knowledge.¹⁰ Following the Second World War, recommendations for reeducating the Germans included democratic aims, a practical curriculum more related to life, and a program of activities that would provide for democratic living.

Aims of secondary education in England. Character is one of the general aims of the English secondary schools. Manners and morals are stressed in the entire system, and emphasis is placed upon training the individual. Training youth "to do the right thing in the right manner," whether in games, studies, or social relationships, is considered all-important.

The aims are not specific, but general. Subjects are taught for their cultural and disciplinary, rather than vocational or practical, values. The mind is trained in a general manner in order to function in any capacity. The pupils are not pampered, humored, or given much freedom in the selection of subjects but are trained as their teachers believe will best develop them.

Aims of secondary education in the U.S.S.R. Before the Revolution of 1917, Russia was one of the most backward countries in Europe educationally. The great majority of the population was not in school, and the percentage of illiteracy was high. Of the population of about 150 million, only about 120,000 were enrolled in universities.¹¹ Workers and peasants were never permitted to attend secondary schools or

⁹ P. W. L. Cox, Education in Europe, *National Education Association Journal*, 25 (April, 1936), pp. 115-116.

¹⁰ Auguste Reber-Gruber, Die Erziehung des Mädchens im National-Socialistischen Deutschland, *International Education Review*, 6 (1938), pp. 430-446.

¹¹ A. Pinkevitch, "Science and Education in the U.S.S.R.," p. 11, G. P. Putnam's Sons, New York, 1935.

universities. The schools were of many types operated by various government departments, and the Church dominated many of the schools. The instruction was "adapted to the Tsarist regime, imbued with orthodoxy, worship of autocracy, and the 'Great Russian' chauvinism."¹²

One of the first aims of the Soviet Republics was to destroy the old schools and social order and establish a new system which would train workers and leaders to live in a new order. The specific aims were:¹³

The deepest, most dominating aim of the new education is to educate the children, so that collectively they may create a new world, in which each may live effectively, cooperatively, creatively—leaders and followers, in accordance with their abilities and the exigencies of the situation.

The second dominant aim is to transform the existing adult population as quickly as possible into a really literate, politically intelligent people.

The third aim is to develop and preserve the national culture as an essential to general culture.

To accomplish these aims, new schools and a new system of schools were established which were a radical departure from the older ones. This brought about a unified system of coeducational schools for all. No fees were to be charged, and compulsory education of seven years in urban and four years in rural schools was enforced. In order to liquidate illiteracy, the Soviet Republics established such institutions as workers' and peasants' homes, political and cultural clubs, reading rooms, libraries, self-education centers, schools offering short courses, Communist universities, socialized museums, and theaters. Although illiteracy has not been entirely abolished, it has been greatly reduced.

The aims of independent, or private, schools. The general aims of private schools do not differ essentially from those of public schools. The difference lies in the stress placed on certain specific objectives and in the methods of attaining them. For example, many private schools stress preparation for college by placing more emphasis on the knowledge, skills, and attitudes necessary to do college work; others place great stress on the development of ethical and moral character. These are also aims and functions of public schools. Because of their

¹² *Ibid.*, p. 17.

¹³ Lucy W. Wilson, "The New Schools of New Russia," p. 34, Vanguard Press, Inc., New York, 1928.

independence, private schools may approach the attainment of their stated objectives by methods which might not be permitted in many public schools. This is true in the case of the teaching of religion or the teaching of military skills and information.

Some of the specific objectives and functions of nonpublic secondary schools are:¹⁴

1. To train all boys and girls in the essential intellectual tasks of everyday life, centering on proficiency in reading, writing, and mathematics.
2. To guide boys and girls as individuals in all that pertains to their sound growth.
3. To provide programs of education fitted both to the varied needs which a wise program of guidance may have revealed and to the variety of later educational opportunities.
4. To enable all pupils to discharge their obligations to society, as related to the family, the state, the Church, and groups of which they will be members, such as the business concern or philanthropic organization.
5. To instill in all pupils an understanding of the origins and meaning of American democracy.

GENETIC DEVELOPMENT OF AIMS

In analyzing the needs and activities of man in order to determine aims and objectives, one may analyze the individual as a personality or the activities and place of an individual in society. An analysis of the individual reveals three aspects: physical, moral, and mental. These three represent the three phases of training in order to develop a complete personality. They have been stated or implied in aims with relative shifting of emphasis for centuries. An exaggeration of the physical side leads to athleticism, of the moral to asceticism, and of the intellectual to scholasticism divorced from the realities of life.¹⁵

The aims of Greek educators. Socrates's (469-399 B.C.) most characteristic doctrines were: (1) virtue is knowledge and is teachable and (2) the knowledge man needs is that of himself. Plato (427-347 B.C.), his follower, believed also that virtue is knowledge and that the exalted virtues, wisdom and justice, were not acquired by exercise, but by

¹⁴ The Functions of Secondary Education in the United States, Statement of the National Council of Independent Schools, *School and Society*, 72 (Sept. 23, 1950), pp. 193-195.

¹⁵ Kandel, *op. cit.*, p. 7.

reflection. Plato believed that practical arts were not so valuable as a study of mathematics, music, and dialectic, which were accounted the noblest of human activities.¹⁶ Both Plato and Isocrates (436-338 B.C.) had the same practical aim—good citizenship—but each used a different route for achieving the aim. Isocrates was practical; Plato, theoretical. Isocrates believed in a practical means of training for life, called the school of rhetoric, while Plato's doctrine was philosophical.¹⁷

Both agreed upon a definition of liberal education and, with Aristotle, that education should be used for complete living. The outcomes of liberal education should be judgment and good taste, self-control and modesty, ability to meet one's fellow men, and intellectual interests. According to Kandel, "After two thousand years the educational world is again seeking to make this ideal a living reality in the modern secondary school."¹⁸

The Greeks were more functional in their statement of aims by the time of Aristotle, for society had changed to the extent that he could analyze the individual in terms of his needs as a member of society. Aristotle (384-322 B.C.) emphasized complete living, defined culture to cover all the main activities of man, and based education on the ideal of individual happiness. According to him, the constituent parts of happiness are "nobility, the possessor of many and excellent friends, wealth, a goodly and numerous family, and a happy old age; also such physical excellence as health, beauty, strength, stature, and athletic powers, and finally fame, honor, good fortune, and virtue."¹⁹

Aims of Roman secondary schools. The Romans were influenced somewhat by the Greeks, but their ideals were mostly native in character. The Romans were more practical and realistic than the Greeks. The aim of higher education was preparation for a practical career, while culture for its own sake had no place in their educational philosophy until the latter part of the imperial period. Liberal education was defined in terms of practical needs, while narrow intellectual and moral training was emphasized. Physical training had the practical aim of fitness for military service rather than bodily grace or beauty, while aesthetic education was neglected. Cicero stressed and empha-

¹⁶ Frederick Eby and Charles F. Arrowood, "The Development of Modern Education," pp. 6-8, Prentice-Hall, Inc., New York, 1936.

¹⁷ Kandel, *op. cit.*, pp. 14-20.

¹⁸ *Ibid.*, p. 7.

¹⁹ *Ibid.*, p. 20.

sized oratory as the best avenue for success in almost any profession or for preparation for public life or service. To prepare one to be an orator, all liberal arts must be studied. Toward the decline of the empire, liberal education became an end in itself, unrelated to life, while form and mechanics were stressed in a superficial manner.²⁰

Aims of secondary education in medieval Europe. The schools of medieval Europe were influenced by the Greeks and Romans on the one hand and by Christianity on the other. The early Christians had little sympathy with pagan schools and believed that education was an essential function of the Christian home and Church. The aims of their schools, which have changed only in emphasis, were concerned with morality, religion, and knowledge of the Scriptures, together with certain attitudes and doctrines to further the beliefs of various groups.²¹ The cathedral schools and grammar schools in monasteries and churches were for the primary purpose of improving the scholarship of the clergy.

Aims of secondary education during the Middle Ages.²² When the Church of the Middle Ages recognized a need for educating ministers and church workers, it found a model in the traditional practices of the Roman Empire, which placed secondary education in the hands and under the supervision of the state and its officials. The aims were to prepare "loyal followers of the faith"²³ devoted to the salvation of their own souls and to prepare Christian leaders. Although the monasteries played a part in conserving learning, mainly for their own novitiates, and in copying manuscripts, the cathedral schools were by far the most important. They furnished the link between the Roman grammar schools and schools of modern times. They had their origin in the practices begun by bishops of teaching small groups of students (from the ages of seven up) who lived in their households. The chief study was grammar as a preparation for Latin, which was needed in church as well as for a practical career. Charlemagne required grammar schools to be established in every monastery and cathedral church.²⁴

The controversial nature of Christianity and the importance of preaching and argumentation made the survival of rhetoric easy.

²⁰ *Ibid.*, pp. 24ff.

²³ *Ibid.*, p. 44.

²¹ Eby and Arrowood, *op. cit.*, pp. 14-15.

²⁴ *Ibid.*, pp. 63-75.

²² Kandel, *op. cit.*, pp. 41-57.

Many of the church fathers criticized rhetoric as such, and when their position and authority became more secure, they became more vigorous in their criticisms of "heathen literature." The fact is that they were forced to some extent to follow the pagan models as a means of appealing to the intellectual classes. Augustine went so far as to say that ignorance and holiness were not synonymous and that lack of culture was unbecoming in a student of the apostles. Furthermore, he argued that rhetoric was needed as a weapon.²⁵

The medieval schools kept learning alive, although, as in the schools of the Greeks and Romans, subjects finally became ends in themselves. The curriculum was static and unchanging. Consequently, the school declined.

Influence of the Renaissance on educational aims.²⁶ The Renaissance marks the division between the medieval and the modern world. No exact dates can be set for this period, but it is usually considered as about the fourteenth and fifteenth centuries. It was an intellectual awakening, a return to learning, which had its center in Italy. Old manuscripts of the Romans, and also of the Greeks, were sought and read. Thus Latin became all-important, for it was needed to unlock the storehouse of learning. Latin was also needed by diplomats, secretaries, scholars, and men of affairs.

Abelson²⁷ in his "Seven Liberal Arts" points out the fact that the classical writers were read in western Europe during the Middle Ages, and he cites cases to demonstrate that they were read widely. Grammar, rhetoric, logic, arithmetic, geometry, astronomy, and music all flourished to some extent during the Middle Ages. Some of these arts schools gradually developed into universities, and they expanded the curriculum to include such subjects as law, medicine, and theology as well as the liberal arts. Often the development was stimulated by the receipt of special favors from the governmental authorities, and sometimes by the presence of famous teachers such as Irnerius at Bologna and Abélard at Paris.²⁸

²⁵ Theodore J. Haarhoff, "Schools of Gaul," pp. 151ff., Oxford University Press, New York, 1920.

²⁶ Eby and Arrowood, *op. cit.*, p. 17.

²⁷ Paul Abelson, "Seven Liberal Arts: Study in Medieval Culture," Teachers College, Columbia University, New York, 1906.

²⁸ S. S. Laurie, "The Rise and Early Constitution of Universities," Chaps. VIII, IX, Appleton-Century-Crofts, Inc., New York, 1907.

The chief requirement for entering the universities was a knowledge of Latin, and this stimulated the growth of lower schools. The Latin grammar schools, cathedral, monastic, collegiate, and guild schools increased in number in order to prepare boys for attending the universities.

Latin became so universal that innkeepers used it, and beggars even asked for alms through the medium of that language. Students were at home in any country since Latin was the universal language of universities and scholars. New secondary schools were started in the fifteenth century in Italy, England, and Germany. In Italy, they were started as private schools by such men as Vittorino da Feltre, but as a type they were short-lived. In Germany, they were established by action of separate states; in England, through action of philanthropic groups and by individuals. With the rise of chivalry, schools were established in palaces of noblemen, where instruction was given in the duties of being warriors, rulers, and diplomats. This instruction was called "chivalric" or "courtly" education.²⁹ Although the clergy monopolized the cathedral schools and universities, burgh schools or Latin grammar schools were established under municipal auspices. The church leaders resisted this trend, for they believed education was a church, and not a state, function. It was many centuries before state systems of education developed free from parochial control.

Educationally, the chief change caused in secondary schools and colleges by the Renaissance was the emphasis placed upon Greek and Latin. Manuscripts of earlier writers were written in Latin and Greek which were the most highly developed languages of the period. Although the schools, for the most part, were dominated by the Church, which caused emphasis to be placed on moral training and piety, much stress was placed on the classics, such as Terence, Virgil, Ovid, Caesar, and Cicero, because they dealt with human problems and interests. This gave rise to the name of "humanists" for those who studied them, and the term "humanities" became synonymous with Latin. Latin was a practical, not a cultural, subject at that time, for it furnished a means for studying doctrines and for translating the Scripture; but by the end of the sixteenth century the means became an end in itself, that is, the ability to express oneself clearly and forcefully.

²⁹ Eby and Arrowood, *op. cit.*, p. 22.

in Latin became primary.³⁰ Emphasis was placed on grammar as a foundation for Latin. It was also an important college-preparatory subject, since most of the instruction in colleges was through the medium of Latin. Greek, formerly taught in order to interpret the New Testament, had lost much of its influence but was still the only great competitor of Latin in secondary schools of the sixteenth century.

EDUCATIONAL AIMS OF OUTSTANDING EDUCATORS AND COMMISSIONS

The statements of educational aims of educators do two things: (1) they give expression to the goals of society not clearly formulated otherwise, and (2) they establish new goals for schools. Usually they are composites of both, and the statements dare not get too far in advance of society, or they will not be accepted. An excellent example of this is found in the aims of Benjamin Franklin's academy in 1751; his aims were so liberal and far ahead of his times that they were not executed. *

Johann Amos Comenius (1592–1670). Comenius placed emphasis upon usefulness and practicalness, for he believed that everything has a purpose. In "The Great Didactic" (1657), Comenius sums up his idea of an educated person: "Become learned in the sciences, pure in morals, trained in piety, and in this manner instructed in all things necessary for the present and for the future life."³¹ His idea was to teach for life, not for school, so that one could be trusted with the duties of life.

Francis Bacon (1561–1626). Bacon placed more emphasis upon words than things. According to him the functions of natural philosophy were to raise and refine the standards of living, to enrich pupils' minds, and to teach them to live happily together.³²

John Locke (1632–1704). John Locke placed his greatest emphasis upon moral training, produced through self-denial; physical training, through hardships; and mental training, through mathematics and languages. He placed learning after virtue, wisdom, and breeding.³³

³⁰ Kandel, *op. cit.*, p. 87.

³¹ Quoted by Eby and Arrowood, *op. cit.*, p. 282.

³² *Ibid.*, p. 220.

³³ Frank P. Graves, "A History of Education," pp. 307–308, The Macmillan Company, New York.

His prescription, which was partly misinterpreted in the past, furthered the formal discipline method of teaching.

Jean Jacques Rousseau (1712–1778). During Rousseau's time it was assumed that the interests of society should be placed above those of the individual. Rousseau took exception to this. According to him, institutions and various work were made for man's benefit; man was not made just to serve them.³⁴ Man should revert more to nature, be more of an individualist rather than be suppressed by society. Rousseau advocated teaching for present needs rather than for those of the future, a time which the pupil may never reach,³⁵ and that youth should be educated for a changing environment. He opposed an education for a definite vocation and pleaded for a generous, liberal cultivation of the natural endowments of a child. His fundamental aim was to preserve the natural goodness of the human heart and a form of society in harmony with it. If not the originator, Rousseau was a proponent of the old idea that adolescence is the age of reason, which emerges at puberty. Before this time, he claimed, one should not try to use reason.³⁶ He also believed that one should be taught how to acquire knowledge when necessary, rather than be taught knowledge directly.

Benjamin Franklin (1706–1790). The curriculum proposed by Franklin for his academy in 1751 was broad, for it was to include everything "most useful and most ornamental." An analysis of his curriculum reveals that he placed emphasis upon a study of English, considered vocational training important, and mentioned health as an objective of science. It was Franklin's idea that youth be instructed in *true merit*, or an inclination to serve mankind, one's country, friends, and family, and that this ability could be acquired through *true learning*, which is the great aim and end of all learning.³⁷

Johann Friedrich Herbart (1776–1841). The chief aim of education according to Herbart is morality, meaning good character and social adjustment.³⁸ As contrasted with Rousseau, Herbart believed that a good teacher would anticipate and teach the future aims of an individual. Youth should be given the broadest possible training, with varied experiences, so that he would develop "many-sidedness of inter-

³⁴ Eby and Arrowood, *op. cit.*, p. 469.

³⁵ *Ibid.*, pp. 474–475.

³⁶ Quoted by Eby and Arrowood, *op. cit.*, p. 499.

³⁷ Kandel, *op. cit.*, p. 172.

³⁸ *Ibid.*, pp. 761ff.

ests." These two aims, moral character and many-sidedness of interests, form the complete objectives of education, for they will assure wise moral and vocational choices. They may be subdivided into the developing of insight, instilling proper interests and desires, imparting inner control, giving a child a chance to see life in all its phases, and maturing his judgment.

Herbert Spencer (1820-1903). Spencer was one of the first educators to express aims in the form of activities derived through an analysis of human life. This type of approach is functional in that it furnishes a basis for the selection of educational activities. His analysis of activities which were selected to prepare one for complete living were:³⁹

1. Self-preservation.
2. Vocations.
3. Rearing and disciplining children.
4. Maintaining proper social and political relations.
5. Leisure and the qualification of tastes and feelings.

Spencer's aims were important for their influence on education in both England and the United States. Up to the time of Spencer's analysis of objectives, the aims of secondary education were generalized and vague, affording little or no basis for what the school's purpose was. Such a general statement as "preparation for life" is almost meaningless, for it does not indicate what kind of life or what constitutes complete living.

Inglis's objectives (1918). Inglis formulated three objectives for secondary education from an analysis of the activities required of each individual. The three are:⁴⁰

1. The *social-civic aim*, or the preparation of the individual as a prospective citizen and cooperating member of society.
2. The *economic-vocational aim*, or the preparation of the individual as a prospective worker and producer.
3. The *individualistic-avocational aim*, or the preparation of the individual for those activities which, while primarily involving individual action, the utilization of leisure, and the development of personality, are of great importance to society.

³⁹ Herbert Spencer, "Education," p. 32, Appleton-Century-Crofts, Inc., New York, 1883.

⁴⁰ Alexander Inglis, "Principles of Secondary Education," pp. 368ff., Houghton Mifflin Company, Boston, 1918.

Taken together, these three aims constitute the social aim of secondary education in the broadest sense of the term. Every individual as a social unit is at the same time a citizen, a worker, and a relatively independent personality.

Committee of the North Central Association (1924). A committee appointed by the North Central Association of Colleges and Secondary Schools presented in their report the following aims of secondary education: ⁴¹

1. To maintain health and physical fitness.
2. To use leisure time in right ways.
3. To engage successfully in vocational activities.
4. To sustain successfully certain definite relationships such as domestic, community, civic, and the like.

The last objective contains those usually designated as citizenship and worthy home membership, while ethical character is implied in all of them, for one cannot use leisure time correctly or sustain correct relationships without certain moral and ethical standards.

Franklin Bobbitt's objectives (1926). According to Bobbitt, the objectives of education are all the activities which ought to make up the totality of human life from birth to death.⁴² Two years earlier (1924), Bobbitt wrote that "education is to prepare men and women for the activities of every kind which make up, or which ought to make up, well-rounded adult life; education has no other purpose"⁴³ and that "education is primarily for adult life, not for child life. Its fundamental responsibility is to prepare for the fifty years of adulthood, not for the twenty years of childhood and youth."⁴⁴

The latter statement is contrary to modern views and contrasts markedly with the idea of Rousseau that education should be for the present. Many today insist that if present needs, interests, and abilities are cared for most of the future will automatically be cared for.

⁴¹ "Report on Standards for Reorganization of Secondary School Curricula, 1924," North Central Association of College and Secondary Schools, March, 1924.

⁴² Franklin Bobbitt *et al.*, "Curriculum Investigations," Supplementary Educational Monograph 31, p. 4, University of Chicago Press, Chicago, 1926.

⁴³ Franklin Bobbitt, "How to Make a Curriculum," p. 7, Houghton Mifflin Company, Boston, 1924.

⁴⁴ *Ibid.*, p. 8.

The activities of life, forming the major objectives of education, prepared by Bobbitt are: ⁴⁵

1. Language activities; social intercommunication.
2. Health activities.
3. Citizenship activities.
4. General social activities—meeting and mingling with others.
5. Spare-time activities, amusements, and recreation.
6. Keeping one's self mentally fit—analogous to the health activities for keeping one's self physically fit.
7. Religious activities.
8. Parental activities, the upbringing of children, the maintenance of a proper home life.
9. Unspecialized or nonvocational practical activities.
10. The labors of one's calling.

Koos's aims (1927). Koos formulated four aims of secondary education based on an analysis of purposes proposed by 25 leaders and groups of leaders in the field. The aims were designated as: ⁴⁶

1. The civic-social-moral responsibility.
2. Physical efficiency.
3. Recreational and aesthetic participation and appreciation.
4. Occupational efficiency.

Analysis by Touton and others (1927). Touton, in collaboration with graduate students, stated the aims of secondary schools in terms of the activities in which pupils should be directed for the purpose of: ⁴⁷

1. Developing physical fitness.
2. Applying fundamental processes to scientific and social phenomena.
3. Discovering interests and aptitudes.
4. Using native capacities to the maximum.
5. Preparing for economic independence and advanced training.
6. Participating in diversified aesthetic and recreational activities.

⁴⁵ *Ibid.*, pp. 8-9.

⁴⁶ Leonard V. Koos, "The American Secondary School," pp. 150-170, Ginn & Company, Boston, 1927.

⁴⁷ Frank C. Touton, The Role of Objectives in Secondary Education, *California Quarterly of Secondary Education*, 2 (January, 1927), pp. 168-180.

7. Evolving high standards of conduct in personal and group life.
8. Contributing to worthy home life.

One of the unique features of this list is the combining of objectives with functions, as "using native capacities to the maximum" and "discovering interests and aptitudes." These are usually mentioned as the exploratory, adjustive, differentiating, individualizing, guiding, directive, and propaedeutic functions.

Although not implying that it was the only aim of education, Briggs gives as one of the primary aims of secondary education that of preserving the state. The four ways mentioned by him for perpetuating the state are war, police force, social pressure, and education. Of these four methods, it may be safely maintained that no other agency has done as much as education.⁴⁸

An aim which not only implies that democracy should be preserved, but which goes further to state that it should be aided by the schools in its progress, was given by Douglass as the unique purpose of free schools: "The unique purpose of free schools is the education of a citizenry to enable our democratic society to progress and solve intelligently its social, economic, and political problems."⁴⁹

Lindeman summarizes all aims of education in one phrase. He claims that education does not need any diverse goals, for there is but one "supreme and constant goal which may be appropriately joined to the word education, namely, the *harmonious development of personality*. Others are subsidiary and live only a short time."⁵⁰

Cardinal principles of secondary education (1918). Although many other leaders in secondary education have formulated aims, all show a great amount of similarity. The most comprehensive, functional, and influential formulation of objectives was that of the Commission on the Reorganization of Secondary Education, appointed by the National Education Association. The commission determined the main objec-

⁴⁸ Thomas H. Briggs, "The Great Investment," pp. 17, 22, Harvard University Press, Cambridge, Mass., 1930.

⁴⁹ Harl R. Douglass, Can We Re-vamp the High School Curriculum to Fit the Needs of Today? *Baltimore Bulletin of Education*, 14 (September and October, 1936), pp. 49-57.

⁵⁰ Eduard C. Lindeman, The Goal of American Education, in "Democracy's Challenge to Education," ed. by Beulah Amidon, p. 19, Rinehart & Company, Inc., New York, 1940.

tives from an analysis of the activities of the individual, just as was done by Spencer, Bobbitt, and Inglis. The seven objectives are:⁵¹

1. Health.
2. Command of fundamental processes.
3. Vocation.
4. Worthy home membership.
5. Citizenship.
6. Worthy use of leisure.
7. Ethical character.

Health. Social as well as personal efficiency depends upon health, so health needs should not be neglected in the secondary school. The school can teach certain facts about health, help pupils form good health habits, and build attitudes that will promote health. The aim should not be attacked as an isolated unit or as an abstraction, but in relation to other aims and through the medium of all subjects of the curriculum. All courses may make some contribution, however slight.

Command of fundamental processes. Command of fundamental processes usually refers to basic skills in reading, writing, and arithmetic. These have been taught in the elementary school but have been acquired in varying degrees by pupils who enter the high school. The proficiency acquired should be retained by suitable exercises and use, and deficiencies should be noted and remedial treatment given. All pupils should have increased their skill in English and arithmetic during their high-school years.

Worthy home membership. An understanding of the importance of the home as a social institution, and one's place and duties in it, is embodied in the aim of worthy home membership. This aim should be taught incidentally, although the outcomes should be primary. Teaching a pupil in school to be a better member of a home involves a transfer of training, for one cannot make the school like the home. It is not even desirable to do so. School life is as worthy as home life, and one learns to be a member of one through participation in the other because of common elements between them. Certainly there are many activities provided in school which are similar to those in which one engages in the home, as leisure-type reading; but, at the same time,

⁵¹ Cardinal Principles of Secondary Education, U.S. Office of Education Bulletin 35, 1918, pp. 10ff.

many activities of the school cannot be carried over to the home, as certain athletic games and sports requiring equipment, laboratory work, and large group work. Even the home-economics kitchens are not identical with those in the home, although they are comparable.

Vocational efficiency. Everyone at some time in life is responsible for his own welfare and usually for that of others. This means that each person in society should gain proficiency in some vocation, which makes vocational proficiency a social aim. It became an educational aim when accepted by the schools, for they can make a good contribution to vocational training; also, educators felt it was no longer being cared for by some other agency. The multitude of different occupations, the period of training required for them, and the changing society which requires adaptation have caused more emphasis to be placed on vocational training. The increased school population and the urbanization of the population caused a demand for high-school graduates who were more specifically prepared for a vocation. This aim can be overemphasized, for too much time can be devoted to vocational work, at the neglect of the other aims. Perhaps not more than five or six units, at the most, should be devoted to vocational training, and this should be more for getting a basis for vocational work than for training in specific fields. The fundamentals of arithmetic and English, health, and ethical character are basic to any vocation, while courses in business education, agriculture, home economics, and industrial arts have value in many fields. Because of limited time and facilities and the large task of the high school, specific vocational training to the point of a high degree of proficiency is neither possible nor desirable. It would force the selection of a vocation at an early age without sufficient time to explore aptitudes; furthermore, one cannot predict accurately what vocational training is most needed because of a changing economic world. The chief purpose is to help each pupil explore his own aptitudes, become acquainted with the world of work so that he can make a wise vocational choice, and have sufficient background to begin pursuing it.

Citizenship. The commission which formulated the cardinal principles made the following comment concerning civic education:⁵²

Civic education should develop in the individual those qualities whereby he will act well his part as a member of neighborhood, town, city, state,

⁵² *Ibid.*, p. 13.

and nation and give him a basis for understanding international problems.

For such citizenship the following are essential: a many-sided interest in the welfare of the communities to which one belongs; loyalty to ideals of civic righteousness; practical knowledge of social agencies and institutions; good judgment as to means and methods that will promote one social end without defeating others; and as putting all these into effect, habits of cordial cooperation in social undertakings.

All school subjects and all aims help foster good citizenship. It is difficult to teach it directly, although in many places pupils are required to salute the flag and pledge allegiance to the United States of America. A daily repetition of this is likely to become a routine with little thought and meaning attached. Patriotism must not be confused with citizenship, although it is a desirable trait. It is doubtful that patriotism can be taught in any direct manner. Flag saluting, oath-of-allegiance repetition, or a study of our Constitution will not necessarily produce citizens with a real loyalty. Patriotism comes only through activities and experience.

Worthy use of leisure. Increasingly, training in the worthy use of leisure time is becoming more important. The working day is shorter, child labor has diminished, urbanization has removed many of the chores of the home which formerly occupied youth's time, while commercialized amusements have made a wise selection of leisure-time activities more difficult. The school has the task of teaching pupils in one situation how to fill their leisure hours in another. Leisure activities should be recreational, healthful, and, if possible, educational. Pupils should be taught to utilize the common means at their disposal in their own homes and communities for leisure pursuits, as found in sports, games, literature, art, music, and science. School activities should be selected with this idea in mind.

Ethical character. Practically every secondary school for 2,000 years has had ethical character or some similar goal as an objective. It is no less important now than it was, and perhaps it is more important since there are more leisure hours. Crime and delinquency have revealed that youth who are incapable of directing their own conduct are a menace to society. This aim should be taught indirectly, and practically every school subject can make a contribution to it. It is comparable to good sportsmanship and fair play in athletics; honesty in all schoolwork; respect for property, law, order, and authority; and an

attitude of reverence for a supreme being. Ethical character is not synonymous with religion or knowledge of the Bible. In public schools, religion and denominationalism are not permitted to be taught. In some states teachers are required to read the Bible daily without comment. This is a direct method of teaching ethical character, but although it does no harm and increases one's knowledge of the Bible, it is doubtful that it is an effective method of meeting this aim.

Objectives of the Educational Policies Commission of the N.E.A., 1938. The Educational Policies Commission of the N.E.A. divided the objectives of secondary education into four categories described as follows:⁵⁸

1. *The Objectives of Self-realization.* The more specific objectives included in each category are stated in terms of an analysis of an educated person. The phases to be stressed under those of self-realization are: an inquiring mind, speech, reading, writing, numbers, health, intellectual interests, aesthetic interests, and character, for the educated person can speak clearly and effectively; solves problems of counting and of calculating; understands the basic facts concerning health and disease; has mental resources for the use of leisure; appreciates beauty; and gives responsible direction to his own life.

2. *The Objectives of Human Relationship.* This category includes respect for humanity, friendships, cooperation, courtesy, appreciation of the home, and homemaking, for the educated person puts human relations first; enjoys a rich, sincere, and varied social life; can work and play with others; observes the amenities of social behavior; appreciates the family as a social institution, conserves family ideals, and is skilled in homemaking.

3. *The Objectives of Economic Efficiency.* This category includes work, occupational information, personal economics, consumer judgment and protection, for the educated person knows the satisfaction of good workmanship; understands the requirements and opportunities for various jobs; appreciates the social value of his work; plans the economics of his own life; develops standards for guiding his expenditures; is an informed and skilful buyer; and takes appropriate measures to safeguard his interests.

4. *The Objectives of Civic Responsibility.* Under this category is included objectives pertaining to social justice, social activity, critical judgment, tolerance, conservation, social application of science, world citizenship, law observance, and devotion to democracy, for the educated citizen is sensitive to the disparities of human circumstances; acts to correct un-

⁵⁸ Educational Policies Commission, "The Purposes of Education in American Democracy," pp. 47-108, National Education Association, Washington, D C., 1938.

satisfactory conditions; seeks to understand social structures and social processes; has defenses against propaganda; respects honest differences of opinion; has a regard for the nation's resources; measures scientific advance by its contribution to the general welfare; is a cooperating member of the world community; respects the law; is economically literate; and acts upon an unswerving loyalty to democratic ideals.

These are not all the objectives mentioned under each category, but they represent a sufficient number to indicate the general pattern of the objectives. Their chief value lies in their inclusiveness, and the objective manner in which they are stated so that they may be of value in curriculum planning.

In dealing with these objectives, a distinction should be made between ideal objectives and activity objectives. For example, good citizenship may be analyzed into the ideal of a good citizen and the activities of a good citizen. It is the latter with which one deals in selecting the activities to meet the objectives. The difference is similar to that of a definition and a description. A definition of an ideal citizen might furnish one a goal or standard toward which to work, but a description would involve an analysis of the citizen's activities, duties, and responsibilities. The latter only can furnish a working basis for building a school curriculum to achieve the objectives.

General principles of determining and stating educational objectives

1. All aims of the secondary school should be additive to those of the elementary school. All those of the elementary school should be retained, but a different degree of emphasis should be placed on them, and different methods of attainment should be employed. The secondary school should add those which are peculiar to it.
2. Aims should be flexible enough so that various methods of attaining them may be employed in each local school.
3. All educational aims should be also those of society; must be capable of being attained through instruction; and must be accepted by the school.
4. Incidental and false aims must be differentiated from the primary and valid ones.
5. All educational aims should be stated functionally. Vague generalizations have little value in guiding the selection of activities and methods for attaining them. They must be capable of being translated into the school's program.
6. Aims should be changed as frequently as society changes. The general

ones may remain practically the same from one generation to the next, but the immediate objectives and the methods of attaining them will vary from time to time.

7. Since the basic philosophy of a school and of educators is reflected in a statement of aims, the educational philosophy should be clearly stated before aims are formulated.

8. Aims of secondary education should be both for the good of the individual and for the good of society.

9. All educational aims should be stated in terms that are understood by laymen. They should be made known to all.

In the present chapter an attempt was made to answer the question, "Why do the people of the United States desire secondary education?" The answers to this question were given first from the standpoint of the layman who is not able to analyze carefully the needs of society and the role of the school and who gives incidental or false reasons for supporting the high school. When expressed in the language of educators of a former time, aims often became vague, indefinite, and impractical. In the last century, aims have been stated in a more functional manner, owing to a different approach in determining what society wanted, namely, an analysis of the individual and his activities.

In the next chapter these questions will be partly answered: "How does the high school serve the community?" or "What is the value of a secondary education?" "How does the school attack community problems?" "What is the function of the high school together with other educational agencies in the educational process?"

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3

SERVICES PERFORMED BY THE SECONDARY SCHOOL

The general aims of secondary education presented in Chap. 2 are the ultimate goals the school desires to attain. The activities provided for pupils and the services performed by the school are designed for attaining these goals. The general aims of various schools at the present time or at different times will remain relatively constant, but the methods of achieving them will vary.

The people of the United States want secondary schools because of the services they perform. These may be considered as secondary or concomitant aims, for while the school is primarily concerned with the attainment of its primary purposes, others will be achieved incidentally. The services performed by the school may be considered in two categories: those which are primarily for the pupil, which affect the community indirectly, and those which are performed directly for the community. Ultimately, all services, direct or indirect, are for the good of the community or society as a whole, for any improvement of the members as individuals will aid the entire group.

SERVICES PERFORMED BY THE SCHOOL FOR THE INDIVIDUAL

The services performed by the school for individuals are often referred to as functions or special purposes. Inglis groups all the functions of the school under six categories: ¹

¹ Alexander Inglis, "Principles of Secondary Education," pp. 375ff., Houghton Mifflin Company, Boston, 1918.

1. Adjustive, or adaptive.
2. Integrating.
3. Differentiating.
4. Propaedeutic.
5. Selective.
6. Diagnostic and directive.

Adaptive function. The adjustive, or adaptive, function is that which makes one acquainted with, and gives him an understanding of his environment and, at the same time, the ability to adapt himself to a new or changing environment.

Integrating function. The integrating function is that which creates a certain amount of like-mindedness. It might be called the democratizing function, for it aims to bring about a unity of thought and action in civic problems and activities, dispel class distinctions, and inculcate in each person common ideals of democracy. Integration, though the opposite of individualization, is supplementary rather than antagonistic to it. Integration should come first and should be stressed more than differentiation in the elementary school, for if making people unlike were stressed first, a nation of individualists would be created, making it impossible to maintain our present social order and form of government.

The school is only one agency which helps to integrate. Reading the same books, magazines, and newspapers; hearing the same radio programs; seeing the same motion pictures; national advertising and purchasing of common articles of apparel, food, and household equipment, all foster like-mindedness. The schools accomplish this by means of a common core curriculum which all pupils study, by the use of common textbooks or those which are almost identical, and through common literature, art, music, activities, and contact with teachers who have had a common pattern of training.

Often, the method used to integrate pupils is called indoctrination by the use of propaganda. A certain amount of indoctrination is justified. If it is necessary for the good of society or the individual, in order to preserve our institutions and the social order, promote health and safety, or maintain our form of government, then it is justified. Indoctrination differs from education in that the former makes a selection of facts to create a partial impression, omits certain truths, or presents only one side of an issue. It is also used by small groups to force

their point of view.² The whole truth must be learned piecemeal, and as pupils progress through our public schools, they learn more and more facts concerning their social order and they experience a constant modification of their concepts and attitudes.

Differentiating function. If the integrating function were carried to an extreme, a nation of conformists who had no ability to do independent thinking would be created. This might result in an unchanging social order dominated by a few. Thus the differentiating function is just as important in a democracy as the integrating, in order that progress may result. The integrating function might be likened to the keel of a ship, which maintains its balance; the differentiating, to the sails, which give it motion.

Propaedeutic function. The propaedeutic function refers to the college-preparatory function in that while the high school is meeting its legitimate objectives it is concomitantly preparing pupils for advanced study in colleges and universities. One course, or pattern of courses, with the possible exception of mathematics, performs this function no better than others. Although the outcome is a concomitant one, this function should be given special consideration for those who are intending to go to college.

Guidance and exploration. To select those who will continue their education and those who will follow various paths in life is closely related to the diagnostic and directive functions. It is the responsibility of the school to explore the capacities, abilities, interests, and special needs of all pupils and direct them toward worthy goals. It is often mentioned that one of the unique purposes of the junior high school is that of exploration; but just because it is practiced there is not a good reason for not giving pupils a chance to explore during the entire secondary-school period.

Briggs's statement of functions. One of the most comprehensive lists of functions of secondary education is that formulated by Briggs:³

1. *Integration.* To continue by a definite program, though in a diminishing degree, the integration of students.

² See "The Unique Functions of Education in American Democracy," pp. 99-100, Educational Policies Commission, National Education Association, Washington, D.C., 1937.

³ Thomas H. Briggs, J. Paul Leonard, and Joseph Justman, "Secondary Education," rev. ed., pp. 169-195, The Macmillan Company, New York, 1950.

2. *Satisfaction of Needs.* To satisfy the important immediate and probable future needs of the students in so far as the maturity of the learner permits.

3. *Revelation of the Racial Heritage.* To reveal higher activities of an increasingly differentiated type in the major fields of the racial heritage of experience and culture, their significant values for social living, the problems in them of contemporary life, the privileges and duties of each person as an individual and so as a member of social groups; to make these fields satisfying and desired by those gifted for successful achievement and to give information as to requirements for success in these fields and information as to whether further training may be secured.

4. *Exploration of Interests, Aptitudes, and Capacities.* To explore higher and increasingly specialized interests, aptitudes, and capacities of students, looking toward the direction of them into avenues of study and work for which they have manifested peculiar fitness.

5. *Systematization and Application of Knowledge.* To systematize knowledge previously acquired or being acquired in courses in such ways as to show the significance both of this knowledge and especially of law and principles, with understanding of wider ranges of application than would be otherwise perceived.

6. *Establishment and Direction of Interests.* To establish and to develop interests in the major fields of human activity as means to happiness, to social progress, and to continued growth.

7. *Guidance.* To guide students, on the basis of exploratory and revealing courses and of other information gathered from personnel studies, as wisely as possible into wholesome and worth-while social relationships, maximum personality adjustment, and advanced study or vocations in which they are most likely to be successful and happy.

8. *Differentiation.* To use in all courses as largely as possible methods that demand independent thought, involve the elementary principles of research, and provide intelligent and somewhat self-directed practice, individual and cooperative, in the appropriate desirable activities of the educated person.

9. *Methods of Teaching and of Learning.* To begin and gradually to increase differentiated education on the evidence of capacities, aptitudes, and interests demonstrated in earlier years. Care must be taken to provide previous to and along with differentiation as balanced and extended a general education as is possible and profitable.

10. *Retention and Direction of Pupils.* To retain each student until the law of diminishing returns begins to operate, or until he is ready for more independent study in a higher institution; and when it is manifest that he

cannot or will not materially profit from further study of what can be offered, to eliminate him promptly, if possible directing him into some other school or into work for which he seems most fit.

The democratizing function. One of the functions often claimed for the secondary school is that of democratizing youth. There are two points of view in this. One is that of dispelling class distinction and giving a common culture. The other is that of including ideals of democracy in order to perpetuate our present government. Both are legitimate functions of the secondary school, although the latter has been questioned on the grounds that the orientation of the school with respect to democracy has been waning for many years. There are many who believe the principles of democracy should be taught because they fear for the safety of democracy and assume that education is for democracy or that the basic goal of education is democracy. In reality, "Education of the highest type is democracy because individual development or growth can only take place in a free society, that is, a society in which the choices of an individual count for something."⁴ If the school is operated on democratic principles and the pupils live a democratic school life, ideals of democracy will be attained without any attempt to teach them. Democracy is opposed to indoctrination, force, or the shielding of the truth. It fosters comparisons, criticisms, and the "free spirit of science."

Statement of functions by the Educational Policies Commission. Statements on the nature of education, its obligations to society, and its unique functions in American democracy were contained in the report of the Educational Policies Commission of the National Education Association. Briefly, these were:⁵

1. Education embraces knowledge, training, and aspiration: knowledge of the practical, social, and fine arts, and of the funded wisdom and aspiration of the race.
2. Knowledge alone is not enough—ethics is indispensable.
3. Education includes the training of body and spirit.
4. Education is committed to the maintenance and improvement of a

⁴ Eduard C. Lindeman, in "Democracy's Challenge to Education," ed. by Beulah Amidon, p. 21, Rinehart & Company, Inc., New York, 1940.

⁵ "The Unique Functions of Education in American Democracy," pp. 71-100, Educational Policies Commission, National Education Association, Washington, D.C., 1937.

society which is democratic, repudiates government by sheer force, nourishes the free spirit of science, and rests on ideals, institutions, and economy.

5. Education now lays emphasis on its social obligations. It must serve an associational economy and prepare youth for associational life and activities. It must prepare citizens for participation in associational government and must aid in upholding social values.

6. It faces new responsibility for the education of adults.

Other direct services. In addition to the services mentioned, which are closely related to instruction, many secondary schools perform others which may or may not have educational value, depending on whether the school uses the service as an opportunity to give instruction.

1. *School Library.* Most schools contain books for recreational reading and for use in the pursuit of hobbies as well as those for supplementing textbooks and for reference.

2. *School-lunch Program.* In recent years this service has been added to many schools and is aided by the Federal government. It is justified on the grounds that it contributes to health and may be employed as an educational activity.

3. *Transportation.* As the consolidation of schools proceeds and pupils must attend schools at greater distances from home, transportation is needed. This service can be performed by the school better than by any other agency, either public or private.

4. *Medical Examinations.* The only safe guarantee that all pupils will have a medical examination in order to discover defects which are in need of correction is to have systematic medical, including dental and ocular, inspections. Local practicing physicians, dentists, and oculists are usually engaged for this service, or a full-time school nurse performs these duties. The latter also checks daily for contagious diseases. States are taking the responsibility for some of these services, as, for example, use of the mobile X-ray equipment for photographing the lungs for evidence of tuberculosis.

5. *Vaccinations.* Vaccinations for various diseases are often performed at school by trained nurses or physicians.

6. *Textbooks.* To assure that all pupils will have a complete supply of books, several states and many local districts provide books at no direct cost to the pupils.

7. *Supervision of Activities.* Many types of activities which are not a regular part of the instructional program are supervised by teachers, either at school or in the community. Examples of these are physical activities,

sports, pursuit of hobbies, and various types of social activities as dances, hikes, picnics, excursions; or they may be in the form of sponsoring organizations as the Future Farmers of America, Boy Scouts, or comparable organizations.

These services are so closely related to instruction that no sharp line can be drawn between the two. They are examples of the expanded program of education which is becoming more evident.

These statements of the peculiar functions of the secondary school and its obligations to society do not describe how these purposes are to be accomplished. To say merely that the high school is an integrating, differentiating, democratizing agency, etc., or that it is "committed to the maintenance and improvement of society" is not sufficient, for these statements are still too broad to be functional. In the following section an attempt will be made to show how these obligations are accomplished by the secondary school by citing examples of more direct benefits to the community.

HOW THE SECONDARY SCHOOL SERVES THE COMMUNITY

As mentioned in the previous chapter, as the needs of society grew and as civilization became more and more complex, secondary schools developed in the direction of meeting these needs. Many of these needs could have been achieved by other means, but they could not have been so efficiently and effectively achieved by informal educational agencies as they could through the secondary school.

Society could exist without secondary education for all youth; but it would not have attained its present state without it, nor would advancement be very rapid toward the American way of life. For centuries man lived without such modern conveniences as the radio, telephone, automobile, and without the knowledge now possessed by scientists. Now that we have them, no one would argue seriously that they be abolished merely because we can live and have lived without them. Once experienced, modern conveniences become a necessity.

This is true of the secondary school, for the services performed by it are as essential as those performed by modern machinery or by social institutions such as the hospital. Many of the enterprises undertaken by the communities, the states, or the nation would not be pos-

sible without the millions of people who are products of the public schools. The following are examples of the things that could not have been done or the resources that we could not have were it not for secondary education:

Keeping informed of the activities of the government and participating in deciding issues.

Understanding and operating many of the machines and devices in use today.

Applying scientific knowledge to problems of production in agriculture. Possessing the skills and knowledge necessary to keep the records and

make the reports for operating one's own business or business affairs.

Having the thousands of trained workers and specialists needed in production plants.

Training millions of men and women for war jobs and then retraining them for peacetime activities.

These are only a few examples of the many activities, enterprises, and programs made possible to a great extent because of the preparation received in the secondary schools. It has been claimed that our advanced form of life has been greatly retarded because of the decreased number of persons who attended the secondary schools during the war and because the schools were crippled by a shortage of well-trained teachers. It must not be assumed that the secondary school is being assigned the full credit for these national abilities, for other agencies of an informal nature make contributions.

The following sections present a number of community problems that are attacked directly or indirectly by the secondary school. The solutions are made possible because the school prepared youth to be in sympathy with as well as to promote modern changes and improvements.

Promoting health and sanitation. One of the primary problems of any community, county, or state is that of promoting the general health of the people. To accomplish this, medical doctors, nurses, dentists, and health officers are trained, partly or wholly, at public expense. Hospitals are established as a state, municipal, or private enterprise; state and local laws are passed regulating the production and distribution of food and milk, while engineers are employed to supply communities with an adequate supply of pure water and dispose of

sewage. What is the work of the secondary school with respect to these community health needs?

This problem is attacked from two points of view, by aiding the individual to maintain personal health, and by preparing him to participate in and appreciate the efforts of society as a whole in promoting health and sanitation.

The first is accomplished through courses of study in science and physical education in which certain laws and principles are presented concerning personal hygiene, the spread of disease, and the maintenance of physical efficiency.

Experiences designed for the benefit of society as a whole, presented mainly in the social studies, are designed to develop attitudes of civic responsibility and knowledge of how society has cooperated to improve sanitation and health. Quarantine for various diseases would be ineffective if it were not respected; pasteurized milk would not be purchased if its values were not appreciated; law enforcement would be ineffective in requiring vaccination if its values were unknown; and community officials would not be concerned over such problems as securing a pure water supply, pure food, sewage and garbage disposal, and general city cleanliness if they were ignorant of the effects upon health or the spread of diseases. The secondary school performs its service by preparing persons to solve these problems and to co-operate with others in promoting the general welfare. It is only a matter of a few years after finishing high school before the graduates are modifying community life either by occupying public offices or holding other positions of leadership.

Often the influence of the school is immediate, either through a direct attack on the problem by the school or by the education of adults by their children who are enrolled in school. Many high schools have initiated "cleanup campaigns" or have, through the medium of posters, displays, dramatization, essays, or their school paper, exerted a direct influence on the community with respect to problems of garbage disposal, eradicating flies, quarantine, cleaning up vacant lots, draining swamps to prevent mosquitoes, or having the wells and other sources of water supply tested. It is not uncommon for high-school pupils to relate to their parents the experiences they have had in school and either inform them of proper procedures or persuade them to change their practices. The textbooks of the schools go into every

home of the community, and parents often read them because they are interested and want to be informed, or to keep up with their children or help them in their schoolwork.

It is impossible to demonstrate definitely the extent of such influences. Formal investigations are difficult to make, since many factors cannot be controlled, nor can the specific influence of the school be disassociated from that of other educational agencies, as the radio, newspapers, magazines, or cinema. The values of the high school, however, are not wholly implied or speculative. Practically every teacher has or could have observed examples similar to those just cited.

Elevating the standards of home life. High-school pupils are also members of and live in homes. Training received in each institution helps one in the other. The school has been called an extension of the home, for it has accepted many responsibilities formerly cared for in the home. Although much of the school curriculum is based on future needs, the modern tendency is to provide as many desirable activities as possible which care for present needs. The school should reflect the life of the home and community. The home provides an opportunity for pupils to utilize the products of school learning. Activities which have carry-over value into the home and which raise the standards of home life may be grouped under such headings as home life, beautification, lighting, recreational leisure time, and educational activities.

The shift from rural to urban centers of a large part of the population introduced the problem of providing suitable leisure-time activities to replace the many chores for youth on farms. If the home does not become the center of social and leisure-time activities, youth will soon seek diversion on the streets or in public loafing places or will frequent places of commercialized amusement. The high schools are aiding in the solution of this problem by teaching pupils many useful skills which may be employed in the home and activities with which to occupy leisure time in a profitable manner.

Courses in home and industrial arts are aimed primarily for more worthy home membership. Cooking, sewing, interior decorating, the selection and care of furniture as well as elementary skills in painting, plumbing, and electric wiring are a part of the school curriculum which may be utilized in the home. Many activities from these courses may be pursued also as hobbies.

Practically all courses contribute to leisure-time pursuits, such as

reading and writing from English courses, games and sports from physical education, knowledge of electricity from science, as well as music, painting, drawing, and crafts from other courses.

A project undertaken in one high school concerning proper home lighting was so effective that it influenced the entire community. As a culminating activity of a unit on lighting in a science class, a general assembly program was prepared demonstrating efficient and modern methods of illuminating homes as contrasted with less efficient and less modern methods. Pupils carried the information to their homes and started modernizing them. The demonstration was so successful that it was later repeated for the parents. Several merchants selling lighting fixtures prepared window displays advertising modern lights and displayed posters prepared by high-school pupils urging that "eyes be saved by better lights."

Courses in high-school science have paved the way for rural electrification. Pupils become acquainted with various types of electrical appliances, the cost of operating them, and how to use them efficiently. They are taught to respect but not fear electricity and how to make simple repairs. This type of instruction serves a twofold purpose. It helps to create a desire to modernize rural homes and teaches how to consume electricity economically and safely.

Home-economics and agriculture teachers are perhaps the most influential in modifying home and community life in rural areas. Examples are legion of pupils carrying into the home methods of preparing and preserving food which they have learned at school. Likewise, many farmers have changed their methods after observing the work of a son who applied more modern methods in some project he had undertaken. The authors are familiar with a boy who had a wager with his father that he could raise more corn per acre by employing methods learned in high school than his father could by those he had practiced for years. The son won the wager by such a wide margin that all the farmers in the neighborhood were convinced that the agriculture courses taught in high school were practical rather than theoretical.

Promoting and teaching safety education. The effectiveness of all educational agencies working together is well illustrated by the many safety programs undertaken by schools all over the nation. The co-operating agencies are the schools, the parent-teacher associations, the local police, and the automobile clubs.

The usual form of activities engaged in by the schools is the organization of safety patrols. The principal of the school is usually the official head who appoints or nominates pupils to be members. The boys are generally organized into units with captains, lieutenants, and patrolmen. They are often presented with Sam Browne white canvas belts and badges. Each one is charged with the importance of his responsibility by taking an impressive pledge promising to work for the safety of others and to try to protect himself and others.

Patrol boys usually cooperate with the police department, who instruct them in directing traffic at dangerous crossings. They are backed by the police to the extent that offenders may be convicted on the word of the boys.

To promote safety and make others safety-conscious, they may prepare posters, invent safety slogans, give assembly programs on safety, or prepare sand-table displays portraying the most usual cause of accidents.

Safety on the highways is being improved through courses in safety, including driver education. These courses take various forms, but, in all, instruction is given in reading and recognizing various types of road signs and danger signals, recognizing road hazards, and being polite while driving. Rules of safety in classroom discussions are supplemented with films, lectures, and demonstrations by state and local traffic officers, charts and with sand-table displays. In many schools behind-the-wheel driving instruction is given in addition to the classroom work. Pupils learn either with their own cars or in cars with dual controls.

In many communities, pupils of the schools have made organized attempts to reduce accidents and destruction on Halloween. Schools have sponsored Halloween parties held in the school under supervision of teachers and parents. By having planned activities at school, much of the desire to wander about the neighborhood and engage in pranks is removed. In other schools, lists of desirable activities for Halloween and lists of things not to do are posted.

Increasing vocational efficiency. Although the high school is not the place to develop scientists, artists, and highly skilled mechanics, it does provide opportunities for exploration and guidance in these fields and gives a background for general vocational efficiency and flexibility.

The nearest approach to preparing pupils for immediate employment requiring technical skills is in the field of business education, especially in typewriting. This lends itself well to secondary-school instruction in that one may acquire sufficient skill in a rather short time to fill a position. So far as preparing youths for other vocations of a skilled nature, it cannot be done so well.

Aiding in securing and maintaining good government. Too often the school, as an institution, studies rather than leads in social reform. The usual methods of obtaining good government are to wait until conditions become unbearable and then have a house cleaning. After this, the citizens usually relax until sooner or later conditions get bad again. Good government cannot be assured by such methods. It seems that legislation and sporadic efforts to improve conditions are not effective. The only sure method is through a careful selection of government employees at every election. Maintaining this constant vigilance requires citizens who appreciate, respect, and desire good government. The place where this is taught is in the secondary schools. Although many courses in the school curriculum make contributions toward the achievement of these outcomes, the social studies are primarily devoted to achieving them. The success of all civic education is directly related to the school's participation in community activities. If the community is made the laboratory for courses in civics, it will give meaning and vitality to otherwise rather meaningless, abstract subjects.⁸

Conserving natural resources. A recognition of the influence of the school in developing and molding public opinion is found in the fact that several states are requiring that all pupils of the state be given instruction in the conservation of natural resources. The primary aim of such instruction is not to develop skills in the efficient use of natural resources but to develop social rather than individualistic attitudes. The attitude of the supreme right of the individual over that of the welfare of all society was and is responsible for the wasting and in-

⁸ A more complete discussion of how the school may teach pupils the ways of democracy may be found in "Learning the Ways of Democracy: A Case Book in Civic Education," Educational Policies Commission, National Education Association and American Association of School Administrators, Washington, D.C., 1940.

efficient use of resources. The best method then of preventing this is to develop social attitudes.

Helping beautify the community. Youth has served the community, not only by participation in cleaning up vacant lots and unsightly places and by planting trees and shrubs, but also by organized efforts in locating places which need beautification and improvement. A typical example is found in the case of one school which sponsored a contest in home beautification and improvement. Lists of suggestions were prepared, including such activities as planting shrubs and flowers, keeping the grass cut on lawns and vacant lots, repairing and painting buildings and fences, removing rubbish, pruning and mending trees, and planting hedges and trees. Parents became interested in the project and helped by providing tools, plants, and bulbs and by giving advice.

Schools have sponsored art exhibits of the outstanding masters, with the result that many reprints were sold for homes and an increased interest was created in art. In some schools, pupils have taken as projects the collection of local art productions and displayed them, either in the local school building or in the public library. Interest thus created has had an influence on the place of art in homes of the community.

Cooperating with the community in social-civic problems. Many classes in the social studies have made special studies of their communities and offered suggestions for the solution of problems. These suggestions were given publicity over the local radio, in the local paper, in the school paper, or at P.T.A. meetings. To learn more about social-civic problems, the pupils studied the public utilities of the city, the churches, social organizations, cultural facilities, and the safety, fire, and police departments. They also studied and observed the displays of the chamber of commerce and learned the nature and functions of this organization as well as those of other civic organizations. One civic club, Kiwanis, sponsors a high-school club known as the Key Club. These boys always have a list of civic projects on which they are working, and aid and encouragement is given through the sponsoring Kiwanis Club.

Broadening the concept of the community. If taught with a wider community concept in mind, various fields of study may be used as links to a wider community concept. For this to be done, teachers must view the subjects they teach as representatives within the school of

vitally important interests and ways of living in the adult world outside the school. When pupils see this point of view, it will aid in getting participation on the part of students in an expanded community life. The boundaries of a community should be considered as being indefinite and extending as far as one goes for services such as banking, legal transactions in the county courthouse, hospitalization, and other services. Thus the community concept may be broadened to include the state and the nation.

Aiding in national defense. Another example of the recognition of the influence of the secondary school by society is found in the part given the schools in the preparation for national defense. In the First World War, it was observed that, as a nation, we were physically unfit and vocationally untrained, and too many were not in sympathy with the American way of life. It was also found that soldiers were handicapped because of their poor knowledge of the fundamental principles of reading, writing, and arithmetic.

During the Second World War, the same deficiencies were noted, and the task of overcoming them was referred to the schools. The high-school curriculum was critically examined to determine what modifications and additions should be made to overcome deficiencies. As a result, greater emphasis was placed on physical education and education for democracy, and there was a redefinition of and emphasis on vocational training. Some advocated military training in the secondary schools, but to include military training in the high school would cause it to change character from a peacetime, democratizing institution to one that gave specific preparation for war. Specific military training is best given by the Army, and inductees can learn the needed skills and acquire the necessary information quickly if the schools have done their part previously in giving instruction in fundamentals and in helping to develop physical efficiency. Serving the nation by developing these fundamental skills and attitudes and making youth more physically fit is the school's part in national defense. These outcomes and qualities are equally good in war or peace.

Raising the economic level of the community. A committee on education appointed by the U.S. Chamber of Commerce in 1944-1945 secured data designed to answer the question, "Does education increase the productive and consuming capacity of a people?" The data were

secured in the United States and in other countries, and, after a thorough analysis, it was concluded that education is an investment in people. Other conclusions were:⁷

1. Education is an essential instrument through which commerce, industry, and agriculture can be expanded. A rather close relationship was found between the amount of educational attainments and retail sales, income, magazine circulation, and salaries paid various workers.
2. Regardless of the abundance of natural resources, there is evidence both in the United States and abroad that economic well-being reflects a high level of education.
3. Since education has been and should continue to be a local function—at least on the state level—every community should set to work to utilize education as a lever for its own advancement and should join in a state program for similar advancement.
4. The cost of adequate education is an investment that local citizens and business can well afford in increased measure, when related step by step to the improvement of local economic conditions.
5. The quality of education is not the same in all areas. Educational programs must be made to apply more directly to the needs of the people.
6. Mere technical education is not enough. Cultural education must accompany technical training to develop the appetites of the people for better living.

THE COMMUNITY SCHOOL

Recently there has been increased consciousness of the inadequacy of the high school in serving youth, especially rural youth. Educators are now realizing that millions of high-school youth cannot see that the high school is of great value to them, and many parents are also unable to see its value. This is evidenced by the large amount of elimination from school at the end of the first year. This is partly because times and conditions have changed more rapidly than the school curriculum, which has too often adhered to a traditional pattern designed more for college preparation than for preparation to live in the community, and partly because teaching methods have been such that pupils have not been able to transfer what they were taught in school to life situations. If pupils are unable to see any relationship between

⁷ "Education, an Investment in People," p. 3, Committee on Education, U.S. Chamber of Commerce, November, 1944.

what is taught and life situations, for them, schooling seems to be of little value.

To overcome these weaknesses in the high school, several schools have reorganized the content of the curriculum to include more practical material and have introduced new teaching techniques designed to cause the transfer to proceed more rapidly. Such schools are often known as "community schools."

Definition of community schools. Many definitions of the community school have been formulated; these are incomplete within themselves, but taken collectively they give an adequate concept of the term. Some of these are: A community school is one that

Centers many activities of community life about the school, and operates a full-time educational center for the entire community population.

Teaches youth how to live in a community by translating curricular materials into real life activities.

Utilizes all appropriate community resources in its educational program.

Actively serves the locality through direct attack upon some of its pressing problems and assumes a major responsibility for the improvement of the life and institutions within its area.

Leads in coordinating democratically all community agencies toward the common goal of more effective education in that locality.

Orients its aims and purposes to pupil needs and backgrounds as determined by community life.

Although there are schools with some of these characteristics in both rural and urban areas, those in rural centers are in a position to develop more of them. In urban centers, activities and interests are divided, for the school is only one of many social and economic agencies serving the community. Other agencies may include boys' clubs, the Y.M.C.A. and Y.W.C.A., civic clubs, public libraries, and social-welfare organizations as well as public playgrounds, parks, museums, and commercial recreational centers. In places where these are in existence, the school should help coordinate them so they will work toward the same goals, but it does not have to sponsor them. According to the definitions given, two community schools will be alike only in so far as the communities are alike, for each must be indigenous to that locality, and regardless of the number of agencies serving a community the school can coordinate activities and utilize appropriate community resources in the curriculum.

Many community schools which have interesting and unique features have been described in educational literature. Rather than describing a particular one, the descriptions which follow give features and practices selected from many which have been reported or observed.

Centering activities of community life about the school. In many community schools, the facilities of the school, as the playgrounds, gymnasium, libraries, auditorium, and lunchrooms and kitchens, are made available to the adult population of the community. They are used during and after school hours both by adults and youth for recreation, leisure and study-type reading, lectures, motion pictures, socials, dinners, dances, dramatics, games, and sports. In some cases, schools are open each evening for these purposes as well as for adult classes. A director of this program is often employed, or one teacher's work begins after the school day is over and extends through the activities of the evening.

Vitalizing activities by utilizing community resources in the curriculum. Without help, many pupils are unable to transfer materials learned in school into real life activities outside the school. To aid in this translation, the community rather than the school building becomes the classroom. Pupils observe the things they are studying and acquire skills through activities in real life situations. For example, pupils may read and discuss how to make wise purchases, how to manage a bank account, or how to purchase a money order or other methods of sending money through the mails; but they may not be able to practice any of these unless instruction is given in stores, banks, and the post office.

Various aspects of community life are studied in different courses; materials of the community are brought into the classroom; community problems are considered in school, and the school grounds, farms, and places of educational interest in the community become the laboratory of the school. Examples are local government, sanitation, fire prevention, conservation, safety, recreation, trading, and marketing. Topics for themes, assemblies, and discussions either are found on the school grounds or are matters of vital interest in the community at the time.

In addition to the usual instruction given in courses in agriculture, home economics, and industrial arts, in community schools pupils study the animals, plants, homes, gardens, and industries of the com-

munity. Activities, as cooking, sewing, home decorating, and home management, are applied directly to the homes of the pupils.

Rendering direct services to the community. Community schools serve the community directly by preparing youth to live better in it, by following democratic practices, by making the school the social and recreational center, by encouraging community use of school facilities, by elevating standards of living, and by demonstrating better farm practices. For example, in some schools pupils of the agriculture classes help control plant and animal diseases and harmful insects and demonstrate contour plowing on the farms in the community.

Providing work experience. In many schools, all pupils are encouraged to engage in some type of work experience. The schools are able to provide some of it, and arrangements are made for other pupils to work in the community under supervision of the school and the employer. Some of the types of work are clerical, domestic, construction, automobile mechanics, agricultural, and others, depending on the vocational opportunities available in the community, and the interests of the pupils. The work is usually done before and after school and on Saturdays, although there are some schools in which pupils may work one or more periods during the school day or work a half day and attend school the other half.

Providing opportunities for student participation in school government. Students are encouraged to participate in school government, for one of the characteristics of a community school is that it practices democracy. Most of the responsibility for much of the management of activities, conduct, attendance, housekeeping, and hall traffic is given to students in many community schools. The teachers work with the students rather than controlling or directing them in school government. Problems are discussed at student council and faculty meetings and presented to the student body in general assembly meetings.

As a result, pupils consider the school as belonging to them rather than to the teachers or parents. They get practice in self-government, and school life becomes a recognized part of community life, not something of an artificial nature. School and community government are related through instruction in this manner.

Coordinating informal educational agencies. Unless there is some conscious and systematic attempt to coordinate informal educational

agencies of the community, they will not be of maximum value and may result in conflicts. Educational agencies which may be and have been coordinated are boys' and girls' clubs, and civic clubs. If the leaders of these groups and those of the schools work together, there is more probability that they will all work toward the same aims.

Orienting the purposes of the school to the needs of the pupils of the community. One of the major characteristics of a community school is that it is tailor-made for the community which it serves. The curriculum is constructed only after a survey has been made of the environment of the pupils, or it is modified on the basis of a continuing survey of the homes, industries, amusements, recreational facilities, and types of work available to youth. Curricular materials and activities are not borrowed from other schools unless they are first evaluated with respect to the needs of the local school, and changes are made as often as needed to keep the curriculum vital.

Has the high school reached its highest potentialities in serving the community? In spite of the fact that some high schools have gone far in the direction of rendering service to society and in providing institutions that meet the needs of the people they serve, this practice as a policy is still far from being general. As shown in the present chapter, the high school has assumed at least part of the responsibility in the solution of a large number of community problems and has aided materially in their solution; but to say that it is doing all it can in this respect is to minimize the powerful influence such an institution can exert.

It is impossible for anyone to measure accurately the value of a high school to a community. Since it is a cooperating agency in the entire educational process, it is not possible to separate its influence from that of other educational agencies. Some of its immediate results can be observed, but many of the far-reaching results cannot be measured in objective terms.

Regardless of the number of observable values of the high school to the community, there are still many persons in the United States who are not yet convinced that its services are proportional to its cost. This is one of the reasons why secondary schools have not been made available to all youth in certain areas. To force secondary schools upon them by the majority who do appreciate the merits of the high school would defeat its own purpose. Rather, it is necessary through an adult-education program to convince them of its merits. The best

way for the school to do this is to take a greater part in the solution of community problems and in community life and demonstrate its value by actual accomplishment.

General principles for making the high school of greater service to the community. The following principles for making the school of greater service to youth and the community are derived from a study of the functions of secondary education in a democracy:

1. The secondary school should strive constantly to be of greater service to youth and to help them in their life adjustment problems; therefore, the school should be an integral part of the community rather than a separate institution within it.
2. Each school should study the community in which it is located and adapt its services to meet the needs of the pupils and the adult population.
3. The services undertaken by the school should be those which are not being adequately provided for outside the school.
4. The secondary school should lead in community improvement; therefore, it should take an active part in helping solve community problems.
5. All educational agencies of a community should work toward the same objectives; therefore, the secondary school should help coordinate the educational agencies of the community.
6. As far as possible, lifelike learning experiences should be provided for pupils; therefore, the community should become the laboratory of the school, and community resources should be used in the classroom whenever possible in order that instruction may become more vital.
7. The secondary school has a responsibility to the adult population; therefore, the school facilities should be extended to them.
8. The concept of the community should be broadened to include the state, the nation, and a world community.
9. All youth should be taught to engage in useful employment; therefore, work experience should be provided by the school, or pupils should be aided in securing part-time employment in the community.

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4

ORGANIZATION FOR SECONDARY EDUCATION

As the desire for secondary education grew, the problem of making the schools accessible for all who wished to attend arose. The factors involved were constructing the buildings, securing trained teachers, determining the administrative area, and financing the enterprise. Such questions as to whether there should be local or state control, public or private support, education for both or only one sex, a separation of church and state or a uniting of these had to be solved.

The present situation is the result of a gradual growth without definite planning by any central authority. Since the Constitution of the United States left the work of establishing schools to the states and the states left it to the local communities and districts, there has developed an organization for secondary education lacking in design and uniformity.

Past methods of providing educational facilities in sparsely settled communities. In the late Colonial period and early part of the nineteenth century, the school district was considered to be the largest unit feasible for school administration. This idea developed because of the slowness of communication and transportation and the resulting isolation. Although changing conditions have made the district system obsolete, it has shown a great tenacity when attempts have been made to abolish it and create larger administrative areas.

The first school districts were for establishing elementary schools. When the high school became legalized as a tuition-free, tax-supported institution, the elementary- or common-school districts took over the responsibility of establishing high schools or two or more combined to form "joint," "consolidated," or "union" districts. The latter was an approach to an administrative unit large enough to finance an ade-

quate program. A few states adopted the county as a unit, which was a step in advance. Many pupils are being transported to consolidated or urban schools, and in some places dormitories have been established.

The small district system did not materially affect densely populated areas, but in rural areas it resulted in the establishment of thousands of small high schools enrolling fewer than 100 pupils. These schools try to maintain four-year programs with one to three or four teachers and without adequate funds for equipping the school or paying the teachers.

DEVELOPMENT OF THE PRESENT ORGANIZATION FOR SECONDARY EDUCATION

The present organization for secondary education was built upon the organization for elementary education, which accounts for the lack of uniformity and for the large number of districts which do not have high schools. The district system was established to provide for a state system of elementary education, while secondary education was still believed to be a church or private function. After secondary education was accepted as a state enterprise, the district system was modified, changed, built upon, or retained, depending on the density of the population or the section of the country.

To trace the development of this system, it is necessary to begin with education during the Colonial period.

Colonial period. The first secondary school established in America was the Latin grammar school established at Boston in 1635. It is difficult to classify the Latin grammar school as either public or private in administration and support, for it had elements of both. The sources of support were numerous. It was supported by compulsory contributions or levies and by tuition fees which were charged all pupils save those unable to pay. Funds were derived also from the General Court in each colony with grants of land or money. The compulsory contributions led later to a system of rates for raising public funds for education and led in time to the disappearance of tuition fees.

The schools were administered by town meetings. The responsibility for the appointment of a schoolmaster and for general control was vested in selectmen or in general committees appointed at these meetings. Ministers often approved appointments and inspected the schools.

This indicated a close association between the Church and the towns in the control of education.

During the Colonial period, elementary education was provided in various ways. In New England, it was provided in the home, the dame school, and town elementary schools. In Pennsylvania, it was provided by parochial schools; in Virginia, by private tutors and by charity and pauper schools. Private day and night schools were common all through the eighteenth century.

In a number of New England towns, elementary schools were established and supported in much the same manner as the Latin grammar schools, that is, by tuition, endowments, contributions, and general taxes. The Massachusetts law of 1647 made the establishment of these schools in all towns of 50 families compulsory. The chief task of the town elementary schools was to provide instruction in reading, writing, and arithmetic. They were ungraded and indefinite in length. Sometimes the schools were divided, one-half being devoted to reading and writing, the other to reckoning, in which case the pupils divided their time between them. In the Central colonies, schools were to a great extent maintained by religious groups.

As the towns in New England grew, children were unable to get to the school because of the distance from their homes. Consequently the practice of having school at different places in the town developed, and the district system developed. The Massachusetts law of 1789 legalized the district system and repealed the earlier laws requiring the town to maintain a school.

During this period, there was no relationship between the elementary school and the Latin grammar school. The former was designed for those not intending to go to college, while the latter had for its main purpose the preparation for college. Both schools admitted pupils at the ages of 7 or 8. The Latin school at first assumed that those admitted could read, but often it was compelled to provide instruction in reading by an assistant, or usher. The two were parallel and served two classes of people. In 1789, all Latin-grammar-school pupils were required to be 10 years of age at entrance and to be able to read in English. This was one of the first steps in building our educational ladder, which began to take form in the latter part of the eighteenth century. The Latin grammar school received pupils at first at

the ages of 7 or 8, later 10, and graduated them at 14 or 15. The colleges received students at 14 or 15 and graduated them at the ages of 18 or 19. The colleges, during this period, corresponded to our present four-year high schools in so far as ages were concerned.¹

The academy period. The academy was established as a private institution, the first one being that established by Benjamin Franklin in Philadelphia in 1751. It was supported by tuition mostly but later received some state support. The academy contributed little to the development of an organization for secondary education, for after the high school was started in 1821, it competed with it because of their differences in philosophy, that is, the philosophy of a free, publicly supported and administered school as opposed to that of a private one.

There were several almost distinct types of academies classified according to control or function:²

1. Those established as a business venture for the purpose of gaining a profit. These were controlled and administered by individuals or groups. Others operated without profit for the purpose of preparing boys and girls for college.
2. Those established by religious organizations in order to assure religious training and an educated ministry.
3. Those established by state grants or receiving state grants, as in Massachusetts in 1797 and in New York in 1784 when a Board of Regents was established and given the right to incorporate, visit, and aid academies. Many were established in connection with state universities, normal schools, or colleges after 1850, in order to prepare some of those seeking admission. These were gradually abandoned with the rise of the high school.

Most of the states established funds for the aid of the academies, and there was a feeling that they belonged to a state school system. However, the states did not assume control or supervision over them. The supervision and administration was usually left to boards or local control, with the exception of the State of New York, where the Board of Regents exercised control of educational institutions.

¹ William A. Smith, "The Junior High School," pp. 4-14, The Macmillan Company, New York, 1930.

² See I. L. Kandel, "History of Secondary Education," pp. 391-422, Houghton Mifflin Company, Boston, 1930.

The Revolutionary period. During the Revolutionary period, education suffered, since the colonists had other matters to occupy their attention. After peace was established and the states drew up new constitutions, education received some attention. The revolutionary ideas about the perfectibility of man and the doctrine of natural rights led to the idea of education for the masses. Public town schools and charity schools were still providing most of the elementary education. The New York Act of 1795 for the encouragement of schools met with little success despite the fact that it provided a system of state grants. In fact, many communities failed to qualify to get this money, and in 1796 the sum of £944 was given to the various religious groups maintaining schools. A Virginia law of 1796 made provision for three years of free schooling, but the law was permissive rather than mandatory and little good came from it. Some constitutions required that the legislatures should provide schools in which children could be taught at low prices, and others directed that schools be established for the instruction of paupers.

In the first quarter of the nineteenth century, the Lancasterian system was introduced and taken up extensively. It provided an enormous stimulus to elementary education since it was possible for one master to teach several hundred children at a very small cost per child. In 1823 in New York City, the cost was less than \$2 per child per year. School societies were organized; they first supported schools and gradually led the public to the place where it was willing to support schools.³

Early national period. The growth of the district system and the attitude of the Federal government that education was a state function retarded the growth of any strong national system. Between 1789 and 1827, districts became legal in Massachusetts. They were authorized in 1789, given the right to tax themselves in 1800, became corporations in 1817, and all schools were placed in the hands of the districts in 1827. By 1825, the local-district system had spread, and today it is still the most common form of local administrative unit.⁴ Several other obstacles prevented the more rapid development of public

³ J. F. Reigart, *The Lancasterian System of Instruction in the Schools of New York City*, *Teachers College Contributions to Education* 81, Teachers College, Columbia University, New York, 1916.

⁴ Smith, *op. cit.*, pp. 17-18.

schools. Many believed that education was not the function of the state. The apprenticeship system was considered sufficient for vocational training, and pauper and charity schools were still believed by many to be adequate for elementary education. The latter were later given public support, but they fostered class distinction. The parochial school was still considered the best type by many in order that religion, morals, and ethical character might be stressed. The parochial schools sought state support, and in 1842 a New York legislature decided against it, which attitude has been a national policy ever since.⁵

The beginning of a state school system after the Revolution might be traced to Thomas Jefferson, who, in 1779, presented a bill in the Virginia legislature proposing the organization of elementary schools for each hundred and to educate the best pupils in grammar schools. The constitution of Indiana, adopted in 1816, provided that the general assembly should provide by law a general system of education, ascending from elementary school to the universities, which should be gratis and open to all. The same principles were embodied in Tennessee legislation in 1817⁶ and in Michigan in 1835.

State universities started their rise in the early part of the nineteenth century. The University of Indiana was established in 1820, and Jefferson founded the University of Virginia in 1819. The elementary school had already been accepted as a state function and was being supported by taxation. The next step was to include secondary education since the state had already assumed responsibility for elementary and higher education.

The high-school period. The first high school was established in Boston in 1821. It was called the *English Classical School* or the *Boston Classical School*. In 1826, the name was changed to *high school*. It is thought that the term originated with John Griscom, who established two high schools in New York City and who published a pamphlet on education called "A Year in Europe." The term "high school" probably originated because it gave instruction beyond that of the elementary school.

Massachusetts again took the lead in establishing a publicly supported

⁵ A. A. Douglass, "The American School System," p. 121, Rinehart & Company, Inc., New York, 1934.

⁶ Kandel, *op. cit.*, pp. 423ff.

secondary school, but although the idea was planted, it grew slowly. That the high school had a slow growth for the first 50 years of its existence affirms the fact that the great masses of people were not yet ready to accept the new philosophy. It did not gain its present position without a struggle. It is doubtful that any who lived during the contest between the high school, a free public school, and the academy, a semipublic tuition school, knew which would finally be accepted as the American type. The high school had to blaze new trails. It was not established on precedent. Many believed the United States could not afford to give secondary education to the masses at public expense, and others did not believe education was a function of the state.

Legislation legalizing the high school. All educational reforms and advancements are conceived at first in the minds of a few outstanding leaders, who use their influence to educate the masses to their point of view. The rise of the high school is an example of this. Such leaders as John Griscom, who organized the High-school Society in New York, Henry Barnard, through whose influence a state board of education was created in Connecticut, and Horace Mann, who established the first normal school in Massachusetts in 1839, helped establish state educational systems.

Free public education on an elementary level was accepted only after a struggle. Secondary education required a greater one. Some of the arguments against the high school were that it was not right to tax a man to educate his neighbor's children any more than to feed and clothe them; that it was a waste of public funds to give most youth a high-school education; that "it is a shame to tax the poor man to pay a man \$1,800 to teach the children to make X's and pothooks and to gabble *parley-vous*."⁷ It was further criticized because it did not give religious instruction.

Progress came first in the establishment of high schools and second in legislation legalizing the school, which added impetus to the movement. Massachusetts was the first state to pass laws requiring the establishment of elementary schools and the Latin grammar school in 1647. It was also the leader in the high-school movement. In 1827, Massachusetts passed a law requiring that in every town of 500 families

⁷ Quoted in *ibid.*, p. 435.

a teacher must be employed to teach the "common branches" and United States history, bookkeeping, geometry, surveying, and algebra. Since there was no state department to administer the law, its success was not complete. In 1859, a modified law was passed, and on it the modern high school was built.

In Connecticut, through the influence of Henry Barnard, a state board of education was created of which he was the first secretary. A high school was established in Hartford in 1847 and in other towns by local decision. This method was followed in Vermont and Rhode Island.

In 1853, New York State enacted a "Free School Act." In Pennsylvania, a general law was passed in 1854 authorizing the establishment of graded schools and the study of higher branches; in Ohio, in 1853, an act was passed providing that a special city or town school organization might establish a high school.⁸

These laws represented the general situation over the country save in the South. However, they did not settle the question of whether boards of education had a constitutional right to levy a tax for the support of an advanced education for all children.

The Kalamazoo Case. This question was finally settled by a series of court decisions. One of the most famous cases was the Kalamazoo, Mich., case. The issue under contention was that the constitution of the state did not mention high schools and that they should not be supported from funds collected for common schools, since they were a part of higher education; and also that the teaching of a foreign language in a high school at public expense was not constitutional, since the law required that all instruction be conducted in English.

The case was tried as a friendly suit against the school district, and the lower court sustained the school district. It was appealed to the Michigan supreme court in 1872. Again the school board was sustained. The decision established a precedent for other states. In 1880, the supreme court of Illinois held that because the "German language is one of the branches of study prescribed in a public school, it does not change its character as an English school."⁹

A number of these cases appeared before the courts in Illinois, Mississippi, Maryland, Missouri, and Kansas prior to 1899. In all these

⁸ *Ibid.*, pp. 442-444.

⁹ Quoted in *ibid.*, p. 447.

cases, the courts upheld the principle of a free, tax-supported secondary school.¹⁰

Growth of the high school. One of the reasons the high school grew slowly at first was the fact that it had to compete with the academy, not only as a type of school, but also against the philosophy on which it was founded, that is, a private secondary school contrasted with a free public one.

According to Inglis, 321 high schools had been established up to 1860, of which 267 were in Massachusetts, New York, and Ohio. The actual number established is not certain. After 1860, the academy began to decline, and the high school was definitely established as the predominant type of secondary school. The growth was rapid following the legalization of tax-supported schools in 1874. From 1890 to 1954, the number of public high schools increased from 2,526 to 23,746. During the same period, private schools increased from 1,632 to 3,331. The factors causing the rapid growth were:

1. Decline of the academy, although this was more of a result than cause.
2. Increased faith in the high school.
3. Increased wealth and leisure in the United States.
4. Growing need for a trained citizenry.
5. Improved child-labor laws.
6. Compulsory school-attendance laws.
7. Legislation permitting towns, cities, and districts to tax themselves for the support of high schools.

Mileposts in secondary education. By way of summarizing the development of secondary education, a number of important events, listed in chronological order, are presented. These might be called "mileposts in secondary education":

1. Establishment of the Latin grammar school in Boston in 1635.
2. Massachusetts law requiring all pupils to learn to read and write, 1642.
3. The "Old Deluder Satan Act," Massachusetts, requiring the establishment of a Latin grammar school in all towns of 100 families or householders, 1647.

¹⁰ Jeannette B. Burrell and R. H. Eckelberry, *The High School Question before the Courts in the Post Civil War Period: Times, Places, and Participants*, *School Review*, 42 (May, 1934), p. 338.

4. Franklin's Academy established in Philadelphia, 1751.
5. Phillips' Academy established, Andover, Mass., 1778.
6. English Classical School started in Boston, 1821.
7. First high school for girls, New York, 1826.
8. Massachusetts law requiring instruction in high-school subjects in each town of 500 families, 1827.
9. High school became coeducational, 1840.
10. Kalamazoo decision legalizing the collection of taxes for the support of the high schools, 1874.

TYPES OF ORGANIZATIONS FOR SECONDARY SCHOOLS

Because of varying topography, climatic conditions, economic conditions, and educational philosophies, different types of school systems were established, and different types of organizations were effected. The previous section has shown how Massachusetts took the lead and set an example in establishing a public-school system. Although not all the settlers were strongly religious, the religious leaders dominated the situation, which furnished a motive for establishing schools. In order to protect themselves from the Indians, the settlers lived mostly in compact communities, which facilitated the establishment of schools.

In the South, the situation was entirely different. There were fewer hostile Indians to prevent agricultural pursuits, and much land was soon controlled by a few who owned Negro slaves. The winters were mild; so there was work the year around. The plantation owners did not see any need for educating the slaves; so no public schools were established. They commonly hired private tutors for their children or sent them to New England or to Europe to be educated. It soon became a sign of wealth and position to be educated in this manner. The South's first college was William and Mary, established in 1693.

Little headway was made in the South until after the reconstruction period. The constitutions of the various states made provision for a public-school system, but little was done. The factors retarding progress were:

1. A depleted wealth due to the Civil War and conditions immediately following.
2. The greater cost of establishing separate schools for whites and Negroes.

3. The attitude of the plantation owners that education for the masses was an unnecessary luxury and that public schools should be pauper or charity schools.

As a result of great land areas, sparse population, and the systematic manner in which the West was divided into sections and townships, the township or district became the local unit of school administration. Many small schools were established, often with only one teacher.

In 1952, there were 83,237 basic administrative units in the United States ranging from 17 in Delaware to 7,116 in Minnesota.¹¹ Many of these are so small they are hardly able to support a one-room school, and the establishment of a high school is out of the realm of possibility for them. Since 1944, the number of districts in the United States has decreased 21 per cent, indicating many consolidations.

Districts which were thickly populated and had sufficient wealth established high schools early. For those unable to establish schools because of insufficient funds or a secondary-school population too small to make the establishment of a school profitable, there were several alternatives from which they might elect: (1) to send their pupils to other districts, (2) to consolidate with another district for the purpose of maintaining a high school, or (3) to create larger districts such as the county.

The first alternative, that of sending pupils to other districts, is provided by state law in practically all states. In most states, districts not maintaining a high school are required to pay tuition to those to which they send pupils. In others, the expense is borne partly by the state. In some cases, districts not maintaining high schools may pay the tuition of children attending in other districts, but such payment is not required. In many cases, pupils are welcomed in other districts, for they assure additional revenue and increase the enrollment to such an extent as to warrant a satisfactory secondary-school program.

Second, two or more elementary-school districts may unite to form a high-school district superimposed on the original territory. High schools supported in this manner are called "union" or "joint" high schools.

The third alternative is that of organizing on a county-unit basis.

¹¹ Biennial Survey of Education, 1949-50, U.S. Office of Education, 1952, Chap. II, p. 32.

In this case, all districts save those which are independent are abolished, and the affairs of the schools are controlled by a county board of education. There are 15 states in which this plan is employed, among them being Maryland, Louisiana, Kentucky, North Carolina, and Utah. Those which have a complete county unit, that is, no independent units, are West Virginia and Florida.¹²

These methods of making high schools available to all are necessary because of the many local districts which are too small or have insufficient wealth to establish a school. Often, existing high schools are so crowded that they cannot accept more pupils; therefore, consolidation is necessary if facilities are to be expanded to provide for more.

The optimum size of a basic administrative unit is important and has been the subject of much discussion. Butterworth¹³ suggests several principles in determining the size and character of the school unit which may be used as criteria for selecting or judging one:

1. *The Physical Resources.* The area should be large enough that the combined resources will support an adequate program.

2. *Common Purpose.* Those residing in the area should be like-minded enough that a common education will suffice for all. This would require common interests, common purposes, and a high degree of homogeneity.

3. *Continuity of Membership.* The population should be free from excessive population shifts.

4. *Interaction with Others.* The group residing within the area should have or develop a group loyalty and an attitude of cooperation to the extent that all will work toward the welfare and betterment of the whole.

5. *Same Traditions.* Conflicts will occur if the people of one district vary too greatly in their traditions, mores, and cultural background.

6. *Some Type of Organization.* The unit should not merely be an area with fixed limits in which all taxes are placed in a common fund and distributed where needed, but there should be a central authority for planning and administering.

7. *Facility of Contacts.* The unit should not be so large that members of any section cannot contact those of another or that all pupils could not be transported to centrally located schools.

In a later publication, Butterworth gave four factors which he considered important, two of which were additions to his former prin-

¹² *Ibid.*

¹³ Julian Butterworth, "Principles of Rural School Administration," Chap. V, The Macmillan Company, New York, 1926.

ciples: (1) The group should be large enough to be stimulating and small enough to be sufficiently homogeneous for cooperation. (2) The area should be no larger than that which the available leadership is adequate to encompass.

Dawson¹⁴ proposed specific standards for a local school unit, which are presented briefly in the following statements:

1. An elementary school of six or seven teachers, and a minimum of 240 to 280 pupils.
2. A six-year high school should have an absolute minimum of seven teachers and a desirable minimum of ten teachers and a minimum of 210 to 300 pupils.
3. There should be at least one supervisor to each 40 to 50 teaching positions.
4. There should be at least one health nurse to each 2,000 school children and one attendance supervisor for not more than 6,000 census children.
5. The number of employees necessary for a standard administrative and supervisory organization is 31 persons, who will accommodate 12,000 pupils.
6. The minimum size of a satisfactory local unit is approximately 1,600 pupils and 46 teaching units.

Reeves¹⁵ gives four principles of reorganization which partly overlap those presented but are sufficiently different to merit presentation:

1. The attendance areas for high schools should be large enough to make possible a good high-school program.
2. The administrative unit should be large enough to make possible a sound program of administration and supervision.
3. The town and the surrounding community combined should be the basis of the attendance area.
4. The same administrative unit should operate for both elementary and secondary schools. Superimposing a high-school district upon several elementary ones is contrary to this principle.

¹⁴ Howard A. Dawson, *Satisfactory Local School Units*, *Field Study 7*, Division of Surveys and Field Studies, George Peabody College for Teachers, pp. 39, 59, 60, 82; reported in *Biennial Survey of Education, 1934-36*, *U.S. Office of Education Bulletin 2*, 1937, Chap. V, p. 43.

¹⁵ Floyd W. Reeves, *Reorganization—An Educational Must*, *Illinois Education*, 34 (May, 1946), pp. 244-249. Abstracted in *Educational Digest*, 3 (November, 1946), pp. 7-9.

If these principles are followed in organizing school units, they will not be of a uniform size, even in the same state. It is impossible to prescribe the size arbitrarily or block them out from a study of a map. They must be determined from a thorough study of each local community and changes made in the light of experience and changing conditions. Thus flexibility of boundaries should be added as another principle of organization.

Studies show that the county unit is superior to the district in certain respects. Gressman¹⁶ compared seven counties in Maryland, a state organized on a county-unit basis, with seven in Pennsylvania, where the township and the borough are the prevailing types. He found that, in the equalization of costs, the administration of transportation, and the equalization of the weight of taxation, the county unit was superior. It was also superior in the rapidity of closing one-teacher schools. In the matter of entrance upon high-school opportunities by graduates of the elementary school, the Pennsylvania counties which were studied seem to show better results, while in general financial administration certain rather large savings make the county-unit plan of Maryland distinctly superior to the township, borough, or city system in Pennsylvania.

The county unit facilitates consolidation better than smaller units. Likewise, the percentage of one-teacher elementary schools in the county-unit states is less than the percentage in an equal number of states on the small-unit basis.

Since the county as a unit does not meet all the principles and standards of a local unit, there are some who claim it does not represent progress since it is only a step toward larger units and will eventually have to be replaced by another type.

MAKING SECONDARY EDUCATION AVAILABLE TO RURAL YOUTH

Because of the many problems confronting the people residing in rural areas, the establishment of facilities for secondary education did not keep pace with the desire to attend. In those portions of the United States where the population was dense and there was sufficient wealth, the establishment of schools was an easy matter, but in inaccessible, sparsely settled areas with little wealth, it was impossible to make sec-

¹⁶ Dawson, *loc. cit.*

ondary education available to all unless small schools were established. As a result, many contrasts are noted in educational facilities in rural and urban centers.

Typical nonconsolidated rural high schools enroll few pupils, have school terms ranging from seven to nine months, small, often poorly constructed buildings, meager equipment, and few facilities for enriched work. The teachers are poorly paid. They are required to teach four to seven and even eight classes a day, with an equal number of preparations. In the majority of rural schools, the curriculum is narrow—the college-preparatory course being the one usually offered. The schools are not easily accessible. Pupils often have to travel several miles over poor roads, and many pupils have no means of transportation. When contrasted with the typical consolidated school or urban school, gross inequalities in educational advantages are apparent.

Consolidated schools in rural areas are far superior to those which have not combined with other districts. They usually transport pupils to and from school in district-owned busses. The grounds are large and contain many buildings, as a classroom building, home-economics cottage, general shop, gymnasium, cafeteria, and vocational-agriculture building. Although the practice of having many separate buildings is not necessarily desirable, they do provide facilities and enrich the curriculum.

Typical city high schools have better facilities and equipment. Owing to the huge assessed valuation of city property, sufficient revenue is available so that the school is well equipped and furnished with laboratories, libraries, and workshops and usually contains an auditorium, a gymnasium, and special rooms for subjects not well adapted to the typical classroom. The curriculum is varied, including courses in industrial arts, home arts, and commercial subjects and languages as well as general subjects. The school term is usually 9 months in length and in many cases 10 months. Teachers are better paid, and they have more professional preparation than those in rural areas.

The small high school. The extent to which smaller schools have been established is shown by the fact that, in 1952, 30 per cent of all high schools enrolled fewer than 100 pupils and 184 enrolled fewer than 10 pupils. This is far below the number recommended for maximum economy and an enriched program of studies. The United States has been called a country of small high schools and truly merits the

name. The major evils of small high schools may be enumerated as follows:

1. Teachers are overworked because the minimum number of subjects usually offered is 16. With one to four teachers, several subjects must be assigned to each teacher.
2. The program cannot be enriched with activities, elective subjects, nonacademic subjects such as music, drawing, physical education, or vocational subjects such as home economics, shop, agriculture, and commercial courses to the extent that is done in larger schools.
3. Many facilities such as libraries, laboratories, gymnasiums, and shops cannot be supplied because the unit cost would be very high. The same laboratory equipment is required to teach one class of 10 pupils or several classes of 25 to 30 pupils each. The same is true of other facilities.
4. Because of the limited population served by a small high school, and the larger unit, or per-pupil, cost of instruction, the small school is usually underfinanced. Likewise, the wealth in taxable property behind each pupil is usually lower in rural areas than in urban centers. For this reason, the schools are usually understaffed and do not attract the most capable teachers because of low salaries.

The small high school retards the reorganization of regular high schools (8-4) to junior, senior, or undivided six-year schools (6-3-3 or 6-6 plans). The highest percentage of reorganized schools is found among the larger schools, especially those enrolling more than 100 pupils (Table 6). The small school is limited in its efforts to introduce certain features because of a lack of facilities and an insufficient number of pupils and teachers to engage in various types of activities. It would also be economically unsound to provide for a few pupils certain facilities which could serve many more at little additional cost, such as libraries, laboratories, shops, and gymnasiums. Furthermore, the junior high school is more expensive than the same grades in the 8-4 plan. Often it requires a new building, or an extension of an old one already overcrowded, and new equipment and supplies and additional teachers. The small high school is often fed by several small rural elementary schools employing one teacher for eight grades. If two grades are removed, one teacher is still required for the remaining six, but extra teaching help is needed for these grades in the junior high school. Second, the problem of transportation is a retarding factor.

*Table 6. Distribution of Regular and Reorganized High Schools in the United States According to Enrollments **

<i>Enrollments</i>	<i>Number of regular high schools</i>	<i>Number of reorganized high schools</i>	<i>Percentage of reorganized high schools</i>
1- 9	179	5	2.8
10- 24	591	49	7.7
25- 49	1,591	305	16.1
50- 74	1,697	614	26.6
75- 99	1,279	807	38.7
100- 199	2,500	3,525	58.5
200- 299	895	2,208	70.8
300- 499	672	2,434	78.4
500- 999	430	2,327	84.4
1,000-2,499	307	1,229	80.0
2,500 and over	27	75	73.5
Total.....	10,168	13,578	57.2

* Data from U.S. Office of Education, 1954

Small elementary schools can be established within a reasonable distance from homes, but for a junior high school to have an enrollment large enough to justify reorganization, the student body must be drawn from a wide area.

Although these evils are well-known, the difficulties involved in ameliorating them are so great that many have come to the conclusion that small high schools are desirable, arguing that the instruction given in them is superior to that of larger schools because of the individual instruction made possible by small classes. This is probably rationalization. Although there are some advantages of the small high school, it is doubtful that they can compensate for its many disadvantages. However, it is better to have a small high school with all its attending evils than to deny thousands of boys and girls the opportunity to secure secondary education which would not be possible in any other manner.

More recently, however, remarkable advancement has been made in increasing transportation facilities, making them faster, safer, more pleasant, and less expensive. There has been a strong tendency to in-

crease the size of administrative units, to consolidate schools, to improve taxing methods, and to secure aid from the state for districts too poor to finance a minimum program.

CONSOLIDATION AND TRANSPORTATION

The advantages of consolidation. The number of small high schools is being rapidly decreased by consolidation, that is, the bringing together of two or more small schools to form one large one. The advantages of consolidation may be summarized as follows:

1. It makes grouping of pupils and the enrichment of the school program possible.
2. A higher type of teacher can be secured because better salaries can be paid and the larger school attracts better teachers.
3. It reduces the per-pupil cost, since the same facilities can accommodate a larger number of pupils.
4. It makes efficient supervision possible.
5. It provides a social center for all school and community activities so that community activities can be coordinated with those of the school.
6. Consolidation usually improves attendance, scholarship, and health.
7. It makes a high-school education possible for many who otherwise would not be able to attend.

Consolidation usually brings higher standards, a longer school term, a better school plant, and better equipment, such as libraries, shops, and laboratories. With a larger group and more teachers, the single curriculum of the small school can be replaced with a multiple curriculum, thus meeting the needs of all classes of pupils.

Disadvantages of consolidation. Consolidation usually means that a new school building must be constructed. The existing ones are usually too small to house a larger number of pupils. This makes an original cost which would not be necessary if the schools did not consolidate. Since the consolidated school draws pupils from a wider area, transportation is necessary. This entails the purchase of school busses and the employment of drivers and adds to the continual cost of operation. If not adequately supervised, transportation may be dangerous, and it necessitates spending as much as two or three hours per day traveling to and from school.

Many patrons consider consolidation a disadvantage because it re-

moves the local control of the school farther from home. It also breaks old community lines. Many patrons in various local communities who have been supporting a small local high school are reluctant to see it moved to a larger center. They are willing to pay for local pride and for their "rugged individualism."

Consolidation does cost more, but when computed on the basis of the increased service received for each tax dollar, it costs less.

The transportation of pupils. In 1950, over 6,900,000 pupils were transported to and from school at public expense. This number repre-

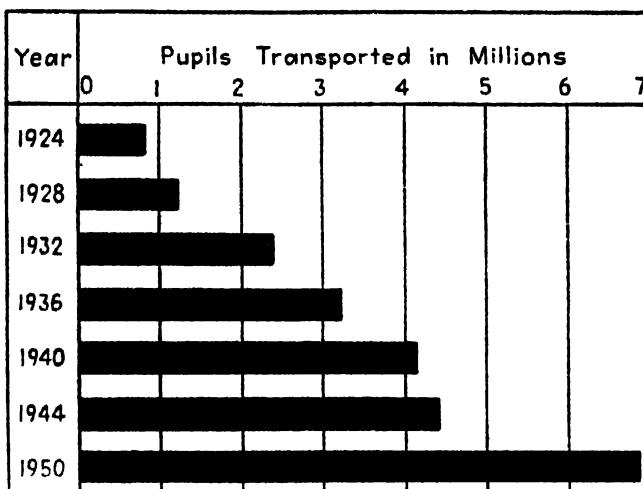


FIG. 6. Trends in pupil transportation. (Drawn from data presented in Biennial Survey of Education, 1942-44, U.S. Office of Education, 1947, p. 47, and Biennial Survey of Education, 1949-50, U.S. Office of Education, p. 10.)

sents 27.7 per cent of the total school enrollment and, as shown in Fig. 6, is a definite increase over previous years. Although most of the pupils are transported in school busses, many ride in commercial busses or trains and have their fares paid by the district.

Drivers of school busses should be well-qualified and mature enough to be responsible for those transported. The distance traveled should not be so great that pupils will be required to remain on busses more than two hours a day, although many remain as long as three to four hours.

The transportation of pupils to and from school is a service which permits pupils to be instructed in schools which would not be accessible otherwise. In order that many pupils may not be denied secondary-

education opportunities, public funds have been used in some cases to transport them to private schools.

In 1947, the Supreme Court of the United States ruled that states may pay bus fares from public funds to pupils attending nonpublic schools if the schools are nonprofit and if transportation is one of the services rendered pupils as a part of their general educational program.¹⁷ This decision, rendered in the case of New Jersey, indicates that other states may extend this service to pupils attending private schools if they desire to do so. Maryland and New Jersey supreme courts have approved transportation of parochial-school pupils.¹⁸ The basis for the aid is the "child-benefit" theory, as opposed to direct aid to the school. This theory, however, has not been accepted by the majority of the courts in deciding on the transportation issue.

FINANCING RURAL EDUCATION

Rural and urban wealth. Urban centers have large resources on which to levy taxes to support schools, as contrasted with rural areas, which have less wealth. Also, there is a great difference between states in their abilities to finance education. In 1952-53 the average expenditure per pupil in average daily attendance a year in New York, an industrial state, was \$295. In Mississippi, a rural state, the average was \$79. There is also a great variation within states due to rural and urban wealth. These differences exist in spite of the fact that those states which have low expenditures for schools exert a greater effort than the average.

These inequalities in wealth indicate that, if we are not intending to abandon our goal of equal educational advantages for all and an equality of educational costs, it will be necessary to get the money where the money is and spend it where the pupils are.

Direct property tax. The oldest and most common form of supporting schools is by means of the direct property tax. This tax is

¹⁷ T. R. Powell, Public Rides to Private Schools, *Harvard Educational Review*, 17 (March, 1947), pp. 73-84.

¹⁸ The State and Sectarian Education, *Research Bulletin of the National Education Association*, 24 (February, 1946), pp. 21-24. States whose courts have declared such transportation unconstitutional are New York, Oklahoma, Kentucky, Washington, Delaware, and South Dakota.

usually levied by district or county boards of education in terms of mills on a dollar. The state often sets a maximum amount which can be levied.

There was a time when the value of property was a fair indication of the income which one could derive from it, but shifts from rural to urban centers, the change from a rural to an industrial nation, and farm debts and mortgages have long since made it necessary to tax more than property. Some of the evils of the property tax are due to inequalities in assessing the value of property, the exemption of too many persons who are not property owners, and the fact that it is not a true measure of one's ability to pay. There is a growing tendency to shift much of the source of revenue from the direct property tax to other sources.

Early aid given by the Federal government. Since the Constitution of the United States does not mention education, it is inferred from the omission that the various states should assume that responsibility. The Federal government, nevertheless, has given aid to the states in order to help education, especially in rural areas.

In 1787, the government made land grants to all new states coming into the Union. These consisted of the sixteenth section of each township, and it was believed that the revenue derived from this land would materially aid in financing education.

In 1862, Congress voted 30,000 acres of land for each congressman, to be used in establishing agricultural schools. This grant gave rise to the "land-grant colleges," which were either separate institutions or a part of an already existing college or university. This law was known as the Morrill Act. In 1890, Congress passed an act providing for annual grants for the support of land-grant colleges, and in 1885 the Hatch Act provided Federal aid for experiment stations to develop a body of subject matter for agricultural schools.

More directly concerned with secondary schools were the Smith-Lever Act of 1914, which gave aid to county farm agents and home demonstration agents, and the Smith-Hughes Act of 1917, which gave Federal aid to agriculture and home-economics teachers in high schools. In 1936, the George-Deen Act was passed, supplementing and increasing the appropriations of the Federal government to the states for vocational work; in 1946, the George-Barden Act was passed, which provided further appropriations for instruction in vocational

agriculture, home economics, trades and industries, and distributive occupations and for training and supervising vocational counselors employed in high schools.¹⁹

These acts have done much to promote the study of agriculture and home economics in rural high schools and have made the positions of teachers of these subjects desirable since their salaries have been increased above the average by the Federal grants.

State aid in rural schools. There is a growing tendency for states to take over the task of helping schools in rural areas. The proportionate amount of the burden each state assumes, the methods of raising funds, and the methods of apportioning them vary among the states. The percentages of school costs borne by the states for the country as a whole increased from 16.5 per cent in 1920 to 39.8 per cent in 1950. This varied from 3.2 per cent in Nebraska to 88 per cent in New Mexico.²⁰

The state should aid in school support in order to equalize costs and to give all an equal opportunity. States require schools to be established; so they should help by stimulating and equalizing.

The distribution of state funds. The aims of state aid are to equalize and stimulate. It is difficult to do both at the same time, for those most able to raise funds locally are the ones who receive the additional rewards for stimulation purposes. For this reason several plans have been employed to apportion funds to local areas. Many are long and involved, and only the general principles of distribution will be considered here.

1. The state should bear a large proportion of the cost of instructional service and equipment; the local area, the major portion for capital outlay, maintenance, and transportation.
2. The state should reward effort in employing good teachers.
3. The state should stimulate an increased enrollment and a higher percentage of average daily attendance.
4. The state should encourage or even force schools to consolidate wherever it is to the best advantage to do so.
5. The state should improve efficiency through state supervision.

¹⁹ See Chap. 14 for further information on these acts.

²⁰ Biennial Survey of Education, 1949-50, U.S. Office of Education, 1952, Chap. II, p. 21.

6. The state should guarantee to each local community a minimum school program after the local community has done all it can in trying to maintain one.

Principles of organization for secondary education. The following are principles of organization for establishing secondary schools and for making them available to all youth.

1. The administrative unit should be sufficiently large to include enough pupils to provide for an adequate educational program extending from the kindergarten through the secondary school. If the consolidation of several small districts is necessary to obtain this type of program, it should be undertaken.
2. The administrative unit should include sufficient financial resources to provide for competent personnel and high-quality educational services. There should be available from local, state, or national sources sufficient revenue to support an adequate educational program.
3. The boundaries of the administrative unit should be flexible. They should be altered whenever social, economic, or other changes occur that influence the type of educational program the unit should provide.
4. The school plant should be centrally located with reference to the population and should be easily accessible to all the students it serves. The problem of transporting students to and from school should be studied when a new plant is to be established.
5. Every youth should have access to a free, public-supported high school. An adequate educational program should be provided for rural youth as well as for urban youth.
6. A school's present structural organization should be carefully evaluated before consolidation is undertaken. The welfare of the pupils should be given primary consideration in the type of organization.
7. State aid should be provided in order to help equalize educational opportunities and to promote local interest. State aid should be based upon the school needs of a community and upon its ability to support an adequate educational program.

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5

SECONDARY EDUCATION'S BOUNDARIES: ELEMENTARY EDUCATION

The school system of the United States does not represent a planned organization. Rather, our elementary school of eight years followed by a secondary school of four years represents the culmination of the growth of two parallel organizations, each of which developed without reference to the aims of the other. During the nineteenth century, it became evident that the usual length of the elementary-school division would be eight years, although in many states of the South it was seven and in some New England states nine. Before this time, it was indefinite in length. Likewise, the secondary-school period was definitely established as four years, making the majority of the schools of the country organized on the 8-4 plan. There was no sound educational basis for the establishment of this type of organization. It was the result of haphazard growth without definite planning.

The system was not to remain long without provoking the criticism of educational leaders. Beginning with President Eliot of Harvard in 1882, and followed by the reports of committees and the criticism of other leaders, the 8-4 plan of organization was attacked, its defects were pointed out, and proposals were made for a reorganization of the system. In 1909, Berkeley, Calif., reported the first reorganized school which contained an elementary school of six years, followed by a three-year junior and a three-year senior high school. Such a system was designated as a 6-3-3 plan of organization. The reorganization movement, once it was started, soon spread, and today the majority of schools are reorganized. These are organized as 6-3-3, 6-6,

and 6-2-4 schools, together with types including the junior college and seven and nine as well as eight years in the elementary division. Because of the many types of school organization found in the United States, it is justly claimed that we have a nation of schools but do not have a national system of education.

It is the purpose of the present chapter to describe briefly the growth of the elementary schools of the United States in relation to the secondary-school system, in order to reveal the basis for reorganizing the 8-4 plan. Since one of the primary reasons for reorganizing was to secure better articulation between elementary and secondary education, a number of principles will be stated and discussed which might produce greater articulation between the two divisions.

DEVELOPMENT OF THE 8-4 SYSTEM

Until the early part of the nineteenth century, schools were usually small. As the school enrollment increased, many of them became quite large, and large rooms were required. To meet the needs of an over-crowded condition, assistant teachers were employed, and finally the whole group was divided. In 1847, the first graded school appeared in Boston. The elementary school was divided into a primary, intermediate, and grammar division, each with a separate teacher. This system of grading was very informal, the divisions were poorly defined, and the whole period was indefinite in length. There were no standards for completion since the academy had no entrance requirements. The curriculum was expanded to include history, geography, spelling, and grammar in addition to the three R's.

The final steps in grading the elementary school came when pupils were placed in grades on the basis of achievement and age, classes were subdivided, more teachers were employed, and one school was composed of many rooms with a teacher in each. Such progress began in towns with the rise of city superintendents. By 1860, 24 cities had superintendents; by 1876, 80 per cent of all cities of 8,000 population or over had superintendents.¹ By 1860, it became clear that the elementary school would be seven, eight, or nine years in length, beginning at the age of five, six, or seven. In New England, it was nine, in

¹ William A. Smith, "The Junior High School," p. 37, The Macmillan Company, New York, 1930.

many Southern states, seven, but for most of the United States, the period was eight years.

The term of the academy was indefinite. Pupils attended until they had accomplished the purpose for which they had enrolled. These purposes were for college preparation, teacher education, general culture, advancement socially, or preparation toward some vocational pursuit. During the early part of its growth, 1751 to 1800, the curriculum was usually organized into a three-year period. Later this was changed to four years.

The term of the first high school (the Boston Classical School) was three years. This was later changed to a four-year term.

Since the majority of elementary schools were organized into eight grades and the high schools into four, by the latter part of the nineteenth century the predominating system was the 8-4, or eight years of elementary followed by four of secondary schooling.

Poor articulation between elementary and secondary schools. As the enrollment in the academies and high schools increased, the elementary-school enrollment increased also. Compulsory school laws² and preparation for the secondary school were two causative factors. The elementary schools became formal as the curriculum expanded and attendance became prerequisite to secondary-school admission, although one did not have to finish the elementary school to enter the academy. The academy was indefinite in length and overlapped both the elementary school and the colleges. By 1880, the high school was accepted as a four-year school, and the most common school type was the 8-4.

Some evidences of the poor articulation between the elementary and secondary school at that time were:

1. Teachers neither thought of nor attempted to have a unified system. They considered each division as independent of the other.
2. Promotional practices were based on examinations rather than on teachers' judgments, and failure and elimination were considered evidence of high standards.
3. Teachers discouraged pupils who could not profit by a classical curriculum and who were considered poor college risks.
4. There was an abrupt change from elementary to secondary education due to a marked difference in curriculum and in methods of instruction.

² Massachusetts had the first compulsory-attendance law, passed in 1852.

It soon became evident that the articulation was not good, and educational leaders began to agitate for reforms.

THE BEGINNING OF REORGANIZATION

Influence of President Eliot. Charles Eliot, for 40 years president of Harvard University, is usually placed first among the educational leaders who influenced the reorganization of the school system. In 1872-73 through the medium of his annual report, he urged that provision might be made for students to enter college earlier and graduate younger. To accomplish this, he urged that all waste be eliminated from the elementary- and secondary-school curricula.³ He pointed out that the average age of admission to Harvard was past eighteen. Again in 1888, he presented the same arguments before the Department of Superintendence of the National Education Association and followed it with another address in 1892. Some of the arguments for reorganization were:

1. In 1886, two-fifths of all freshmen at Harvard were over nineteen years of age at entrance.
2. Private and public educational programs should be shortened and enriched.
3. In French secondary schools, the pupils were better prepared than in American schools at the same ages. The cause of this was waste in the upper grades of the elementary school and inferior instruction in American schools.

To correct these evils, Eliot recommended that the secondary school dip down into the seventh and eighth grades and enrich them by including foreign languages, high-school mathematics, and natural sciences. He made no reference to the establishment of a new unit.⁴

The Committee of Ten. In 1892 a committee of 10 members, with President Eliot as chairman, was appointed by the N.E.A. It was authorized to arrange conferences of secondary-school and college teachers who were to concern themselves with the proper limits and best methods of instruction in all subjects in the secondary-school cur-

³ Ralph W. Pringle, "The Junior High School," p. 15, McGraw-Hill Book Company, Inc., New York, 1937.

⁴ *Ibid.*, p. 16.

riculum. Nine conferences were held, and a report was given in 1893.⁵ Although the committee was not primarily concerned with reorganizing, its report included the following recommendations pertaining to the reorganization of elementary and secondary education: ⁶

1. With the exception of Greek, all secondary subjects should be begun in the elementary school.
2. If algebra, foreign languages, geometry, and natural sciences are begun in grades below the high school, secondary education should begin two years earlier, leaving six rather than eight years in the elementary school.
3. The work in English in the seventh and eighth grades should be departmentalized, and whole classics should take the place of readers.
4. Greek and Roman history should be taught in the eighth grade.
5. Concrete and experimental geometry should begin at the age of ten.
6. High-school methods of teaching should be introduced earlier.

The committee implied the principle of consideration of individual differences and apparently had the 6-6 plan of organization in mind, although it was not recommended.

In 1893 a committee of 15, appointed by the Department of Superintendence of the N.E.A., recommended placing manual training for boys and home economics for girls in the elementary grades, as well as substituting algebra and geometry for a part of the arithmetic in the seventh and eighth grades.⁷

Further movements for reorganization. For two decades following President Eliot's addresses before the N.E.A., there was a deluge of committee reports, addresses, and opinions voiced by educational leaders concerning reorganization and improvement of the articulation between the elementary and secondary schools. Only a few will be mentioned.

Notable among these was the report of the Committee on College Entrance Requirements appointed by the Department of Secondary Education in the N.E.A. in 1894. The committee recommended that secondary education begin in the seventh and eighth grades; that these grades should be enriched by eliminating nonessentials and including

⁵ Smith, *op. cit.*, p. 73.

⁶ "Report of the Committee of Ten on Secondary-school Studies," pp. 45-74, American Book Company, New York, 1894.

⁷ Pringle, *op. cit.*, pp. 17-18.

high-school subjects; that the seventh and eighth grades become a part of the high school; that the period of transition be made better by introducing a system of special teachers in the last two elementary grades in order to avoid the shock of the abrupt change in entering high school; and that special methods suited to adolescent needs be adopted for the last two grades.⁸

Educational leaders expressed opinions which differed in minor respects, but all of them favored an increased length of the secondary period at the expense of the elementary and enrichment and modification of the upper grades. Nicholas Murray Butler (1898) urged that six years were sufficient in the elementary school, leaving six years for the secondary. Through the initiative of President Harper of the University of Chicago, conferences were called in 1901-02 to study the problem of reorganization of the whole system. In one of these John Dewey expressed the opinion that six years were enough for the elementary schools to accomplish their aims of organizing "certain modes of activity in observation, construction, expression, and reflection" and that six years were necessary in the secondary school to accomplish the aim of "opening the mind to avenues of approach to all the typical phases of nature and society and acquiring a sympathetic knowledge of these areas of life—culture in a word."⁹

Arguments advanced by leaders for reorganization. The early agitators for reorganization were advocates of a 6-6 plan of organization and advanced the following arguments to support the system:

1. *Economy of Time.* Economy could be effected by shortening the elementary-school period, beginning secondary education earlier, and thus making the entire system shorter; or by eliminating non-essentials in the upper grades of the elementary school, which would provide space for an introduction of secondary subjects.

2. *More Gradual Transition from the Elementary to the Secondary School.* In changing from the elementary to the secondary school, pupils experienced abrupt changes in methods of instruction and discipline and in the curriculum which made it difficult for them to adjust themselves to the new situation. A six-year secondary period would provide for a gradual rather than a sudden transition by providing two years of intermediate schooling for an orienting period.

⁸ *Ibid.*, p. 19.

⁹ *Ibid.*, p. 21.

3. More Suitable School for Adolescent Ages. The arguments concerning the need of special treatment for the adolescent were begun before any ambitious studies had been made concerning his unique and peculiar characteristics. The first study of any magnitude was made by G. Stanley Hall in 1904. From earlier observations and Hall's work, it was believed that pupils in the seventh, eighth, and ninth grades constituted a more or less homogeneous group and should be given special consideration.¹⁰ This argument will be evaluated later in this chapter.

During the period from 1900 to 1909, the emphasis shifted from proposals and arguments for a 6-6 school to that of a separate intermediate organization or toward the junior-high-school idea. The arguments advanced by leaders for a junior high school were that such an organization would provide for the following:

1. A suitable environment for the early adolescent.
2. A gradual transition from the elementary school to high school.
3. An economy of time.
4. Differentiated instruction.
5. Guidance and adjustment to curriculum.
6. An earlier differentiated education.
7. A check on withdrawals by enriching the curriculum.
8. A realistic education so that pupils could become acquainted with the major activities of humanity.
9. A more flexible curriculum.
10. Introduction of vocational training of a prevocational type and provision for vocational orientation by the exploration of aptitudes, interests, and special capacities.
11. Superior teachers.
12. A reorganization of teaching methods and materials.
13. A democratized system of bridging the gap between the eighth and ninth grades.
14. An introduction of extracurricular activities.
15. A more democratic form of discipline.

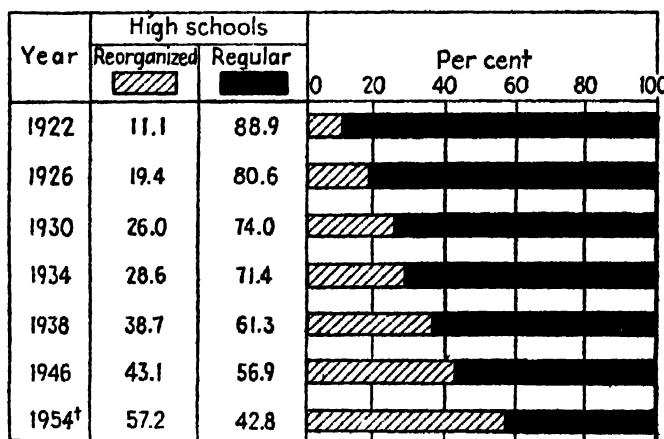
The first junior high school and spread of reorganized schools. Although several schools had introduced some of the features of the junior high school prior to 1909, the first example of a school organized on a 6-3-3 basis which included a separately organized division for

¹⁰ Smith, *op. cit.*, pp. 152-153.

grades 7, 8, and 9 was in Berkeley, Calif., in 1909. A year later, Columbus, Ohio, reported a reorganization of her system, and Los Angeles organized a junior high school in 1911. By 1914, Briggs reported that 187 cities of populations of 25,000 or more had junior high schools as shown by a questionnaire survey.¹¹ In 1917-18, about a fourth of the 1,165 schools of the North Central Association reported some form of junior high school, and in the same year the U.S. Bureau of Education reported 557 junior high schools in places of 25,000 population or over.¹² Many of these schools would not have been considered junior high schools if held strictly to the legitimate aims and functions of one. The early definition as given by the Commissioner of Education in 1914 was "an organization of grades 7 to 8 or 9, regardless of where housed—providing for individual differences by various means, especially by the early introduction of prevocational work or of subjects usually taught in the high school."¹³ This definition is so flexible that the introduction of a few features would permit one to report a junior high school—and many did.

The growth of the movement since 1922 can be seen from Table 2, which shows the increase in the number of reorganized schools to

Table 7. Public-secondary-school Reorganizations, 1922 to 1954 *



*From Statistics of Public High Schools, 1937-1938, U.S. Office of Education Bulletin 2, 1940, Chap. V, p. 9. † Data from the U.S. Office of Education, 1954.

¹¹ "Report of the U.S. Commissioner of Education, 1914." Washington, D.C.

¹² Pringle, *op. cit.*, p. 25.

¹⁸ "Report of the U.S. Commissioner of Education, 1912," Vol. 1, p. 155, Washington, D.C.

1954. Since 1934, the number of undivided high schools has increased more rapidly than the divided types. Furthermore, the 6-3-3 plan of reorganizing constituted only one of the various plans, for many in-

*Table 8. Number of Types of Reorganized High Schools in the United States from 1922 to 1954**

<i>Type of school</i>	<i>Year</i>				
	<i>1922</i>	<i>1930</i>	<i>1938</i>	<i>1946</i>	<i>1954</i>
Junior high schools.....	387	1,842	2,372	2,647	3,227
Senior high schools.....	91	648	959	1,317	1,760
Undivided, junior-senior ..	1,088	3,287	6,203	6,358	8,591
Total.....	1,566	5,777	9,534	10,322	13,578

* Data from U.S. Office of Education, 1954.

cluded other grades, as the 8-2-4 plan. In Table 8 is shown the growth of the various types of reorganized schools from 1922 to 1954.

TYPES OF REORGANIZED SCHOOLS

The first types of reorganized schools were on the 6-3-3 plan, that is, separate organizations often housed in separate buildings. In many systems, housing the seventh, eighth, and ninth grades separately relieved the congestion of overcrowded buildings in both the elementary and the high school; in others, where such a condition did not exist, no economy was effected. To establish a separate junior high school required an extra building and separate equipment, usually a duplication of that in the elementary and senior high school.

The advantages of the undivided six-year school are being recognized by the fact that it has increased more rapidly than separate junior and senior high schools. Some of the advantages of the undivided over the separate school are:

1. Greater economy is secured since only one building, one set of equipment, and one administrative office are required.'

2. Greater articulation is secured by eliminating the break, or gap, between the ninth and tenth grades. There is a natural tendency for students to leave school in greater numbers immediately following the completion of any school division, especially if the culminating activity of that division consists of a commencement exercise and the awarding of diplomas.
3. Promotion by subjects is facilitated in the 6-6 plan since both divisions are housed together and one system of records is kept.
4. Greater articulation is secured through teaching methods since the same teachers who instruct in the senior high school may be assigned classes in the junior division. This will secure greater continuity, prevent overlapping, and assure more adequate preparation for the latter division, or at least, if pupils are not prepared, teachers have no one to blame save themselves.

The type of school organization is often determined by the school buildings in the community and the building needs. For example, if the elementary- and the high-school buildings of those schools organized on the 8-4 plan are overcrowded, the condition can be relieved most economically by the construction of one new building and changing to a 6-3-3 plan of organization. The seventh and eighth grades are moved from the elementary schools, the ninth grade from the high school, forming a junior high school of three years and a senior high school of three years. Thus the school-building situation often determines the type of organization.

The type of school organization of the future cannot be predicted with any degree of accuracy. The trends are toward the 6-year undivided secondary schools; but since the school system is expanding vertically, it is claimed by some that a system of 2 years of kindergarten followed by 6 years of elementary, 6 of secondary, and 2 of junior college, making a 16-year public school divided into several divisions, will eventually become the predominating type.

EVALUATION OF REORGANIZED SCHOOLS

The first junior high schools were established on claims that had not been evaluated save in a philosophical manner. Many of the proposals sounded reasonable; so they were accepted. Criticisms against the 8-4 plan of organization were just; so any innovation was expected to improve the situation. The junior high school had not long been in

existence before those who either doubted the claims or desired concrete verification of them began the process of evaluation.

The effect on elimination. One of the earliest arguments for establishing a junior high school was that it might reduce the large amount of elimination at the end of the eighth grade, but to evaluate this claim that the junior high school would result in greater holding power and arrive at a valid and reliable conclusion is almost an impossible task. Although some studies have been made and some conclusions drawn claiming superiority of junior high schools, especially for boys, it is doubtful that much confidence can be placed in them. Too many factors were uncontrollable. For example, elimination due to illness, death, moving from the community, and extreme destitution of parents is not affected by reorganization; so any differences with these as causes would be due to chance. Since one school must be compared with itself before and after reorganization, other conditions may have changed also: there may be better compulsory school laws and child-labor laws, opportunities for employment may have decreased, and secondary education may have become more popular. There has been a steady increase in the percentage of the school population attending the secondary school, and to say that reorganization is the cause, or to control all other factors in order to show the influence of reorganization, is hardly possible.

Economy of time. Many of the earliest arguments for an economy of time were concerned with shortening the school term rather than with reducing retardation and failure and enriching the curriculum through the elimination of nonessentials. In many states of the South (Virginia, North Carolina, South Carolina, Georgia, Louisiana, and Texas) the elementary course was only seven years in length.

Though there is no demonstrable evidence of the superiority of either the 11- or 12-year system over the other, the seven-year elementary school is practically nonexistent today. All states now report eight-year schools, the change being completed between 1940 and 1950.¹⁴

Another method of saving time was that of enriching the curriculum of the seventh and eighth grades by eliminating the nonessentials and introducing secondary-school subjects earlier. The last two years of

¹⁴ David Segel, *Progress in Eliminating the 11-year School System*, *School Life*, 28 (March, 1946), p. 28. See also "Statistics of State School Systems, 1949-1950," p. 42, U.S. Office of Education, 1952.

the elementary school, to a great extent, repeated the work of the fifth and sixth grades. This repetition is often referred to as "marking time." An examination of the junior-high-school curricula will reveal the changes that have been made. Instead of the usual offerings of reading, writing, arithmetic, spelling, geography, history, and hygiene, in grades 7 and 8, one will find such subjects as composite mathematics, junior-high-school science, social studies, English, physical education, music and drawing, and integrated activities. In many schools the study of foreign languages is begun, and shopwork and home economics are offered. The enrichment of the curriculum does not shorten the school period, but it does effect an economy by giving pupils more experience in the same amount of time.

The economy-of-time claim was also investigated from the standpoint of progress, failures, and repeating courses in junior and non-junior high schools. Fritz secured data from the records of 45,828 pupils from junior and non-junior high schools of Iowa, concerning pupils' progress through school. Normal progress was considered a grade a year. He found that pupils attending 6-3-3 schools had higher progress rates than those of the 8-4 schools. He found that only three-fifths as many semesters were lost in grades 7B in the 6-3-3 schools as in the 8-4 schools and only one-half as many semesters were lost in grades 9B and 9A in the 6-3-3 schools as in the 8-4.¹⁵

Bridging the gap. The gap between the eighth and ninth grades due to the abrupt changes in subject matter and methods of instruction was one argument for reorganization. It was believed that the junior high school would bridge the gap by the gradual introduction of new subjects and methods of instruction. Fritz investigated this claim also and found that the 6-3-3 schools merely delayed the gap one year rather than bridged it.¹⁶

Reorganization in and of itself cannot assure greater articulation between the elementary and secondary schools. Changes in the curriculum must be gradual, and continuity must be maintained. The teachers must engage in a period of orienting and guiding junior-high-school pupils in order that they will become accustomed to new meth-

¹⁵ Ralph A. Fritz, *An Evaluation of Two Special Purposes of the Junior High School: Economy of Time and Bridging the Gap*, *University of Iowa Studies in Education*, 4 (Nov. 15, 1927), pp. 1-80.

¹⁶ *Ibid.*

ods of instruction and such new features as departmentalization and sectioned groups. In the elementary school, the pupils, in most cases, had one teacher for the entire day who taught all subjects. Pupils quickly became accustomed to her and were not required to make adjustments to different teachers for each class as in the junior high school. The situation could be further remedied by having fewer teachers in the seventh grade and by gradually introducing departmental work and a larger number of teachers.

Scholarship. Comparing junior- and non-junior-high-school pupils in scholarship is difficult. Such factors as teaching methods, ability of the pupils, and subject matter, which are difficult to control, must be held constant if comparisons are to be valid. A few studies have been made with respect to scholarship, but none have been conclusive in establishing a superiority of one over the other.

Believing that the shortened period in the elementary school due to reorganization might have an effect on the acquisition of fundamentals in grades 7 to 9, Beatley compared the achievement of pupils in three school systems. In order to obviate the influence of irrelevant factors, he paired the pupils on the basis of sex, chronological age, intelligence quotients, and educational age. Since he found no differences favoring either group, Beatley concluded that neither school had demonstrated its superiority over the other in achievement of fundamentals and that the junior high school is justified in allotting less time to the fundamentals in reading, language, and arithmetic, for this has not hampered the growth of the pupils.¹⁷

The junior high school and puberty. One of the earliest arguments for reorganizing was that the pupils of the junior high school, or of grades 7 to 9, would constitute a homogeneous group with respect to puberty. Since 1900, many investigations have been conducted to determine the average age at which boys and girls reach puberty and the range from the average. These investigations have revealed that the junior high school does not constitute a homogeneous group, but one containing wide differences with respect to stages of pubescence. As studies have shown, at no age is the group alike with respect to physiological development. Between the ages of twelve and sixteen, the greater percentages are at the same stage, but in the other years they

¹⁷ B. Beatley, "Achievement in the Junior High School," pp. 78-79, Harvard University Press, Cambridge, Mass., 1932.

are divided between the three stages, prepubescent, partially pubescent, and pubescent. Although girls mature earlier than boys, they will show the same degree of variation, which makes the group less homogeneous if coeducation is practiced, for girls will be further advanced than boys for any given age or grade. Junior-high-school pupils are made still more heterogeneous with respect to physiological development because of the age range of a given grade caused by under- and over-ageness. The greatest single group in the elementary school is prepubescent; in the senior high school, the majority are postpubescent. This leaves the junior high school composed of pupils between these two extremes who are at all stages of development. It has been found that high-school pupils are not homogeneous with respect to any measure of development, and there is little justification for establishing a separate school for grades 7 through 9 on this basis alone.

The junior high school and fundamentals. Some of the criticisms against reorganized schools are that they give too much pupil freedom and pupil responsibility and not enough adult supervision and guidance. They are also criticized on the ground that the curricula are so full of activities that consume all the teachers' time that they have no time left to prepare for classwork and that pupils also engage in so many activities, take so many trips, and have so many courses that the fundamentals of reading, writing, and arithmetic are neglected. This criticism is voiced against schools organized on the 8-4 plan also. Comparisons of pupil performances on standardized tests have shown that pupils of today are equal, if not superior, to those of a decade or so ago and that an enriched curriculum and co-curricular program of activities has not had a detrimental effect on the acquisition of fundamentals.

PROBLEMS OF ARTICULATION

Good articulation between the elementary and secondary school cannot be achieved by an administrative change or a change in organization alone. The junior high school makes provision for greater articulation and facilitates it but does not necessarily produce it because of any inherent powers. School organization should help provide an uninterrupted, continuously adjusted education for every pupil until he reaches the maximum development possible. This aim can be ac-

complished with or without the junior high schools. However, since the junior high school is at no point wholly like either the elementary school or the senior high school, it serves as a transition period. It has elements in common with both the upper and the lower division and also has some features and functions peculiar to it alone.

Causes of inarticulation. There are several features that do or may cause poor articulation, which may be defined as anything in the school system causing delays and stops over which the pupil has no control. These may be considered as factors or the lack of certain factors which will retard or hinder pupils' progress. The following adjustments must be made in order to secure good articulation:

1. Closer relation between all grades in materials and methods.
2. Slow change from one-teacher to many-teacher plan.
3. Slow change from work closely supervised to that which is independent.
4. Gradual introduction of new subjects, as algebra.
5. Gradual introduction of electives.
6. Promotion of pupils by subjects rather than by grades.
7. Exploratory subjects introduced for guidance.
8. Transition from one grade to another to be not too difficult.
9. Attempt to be made to retain pupils longer in school.
10. Materials and methods to be adapted to pupils.

Promotional policies. There is a definite tendency to promote pupils from one grade to another without maintaining any definite standards. One year in each grade, provided that the pupil has been in attendance an adequate number of days, is considered sufficient. The majority of schools have the policy of receiving pupils in the junior high school from the elementary school without maintaining any definite standards, and, similarly, pupils are received in the senior high school from the junior high school. These liberal tendencies are policies and are not considered ironclad rules of promotion. There are conditions which might make it advisable to require a pupil to repeat a grade or subject in order to have a better preparation for the work of the next higher grade. Flexibility and judgment are needed in the execution of all policies, but if this one is accepted and used in determining promotions, greater articulation will be secured. One should always bear in mind

that preparation for high school is not the primary purpose of the elementary school.

College-entrance requirements and the junior high school. College-entrance requirements based on 15 units of high-school work were common before the junior-high-school movement became widespread. Since only 12 units are normally earned in the senior high school, it is necessary to include the work of the last year of the junior high school in the transcript in order to make 15 units. This practice resulted in a partial domination of the junior-high-school curriculum by the colleges which acted as a damper on an enriched curriculum. It also resulted in considering the ninth grade as belonging more to the senior than to the junior high school. That this practice is disappearing is evidenced by the fact that the majority of colleges in the United States admit pupils on the basis of 12 units earned in the last three years of high school.

Summary and principles. Beginning with 1909, high schools have been reorganizing until now the majority are of the reorganized type. Many of the claims which furnished the basis for reorganization have not been substantiated by experimentation; but even though it cannot be demonstrated that reorganization results in greater holding power, better scholarship, and greater articulation, there are other features which more than justify the change, such as an enriched curriculum, homogeneous grouping, departmentalization, earlier introduction of secondary-school subjects, and an activity program. Although greater articulation between the elementary and secondary school has not been an outstanding outcome, it would be safe to say that reorganization has produced greater articulation and has made provision for a closer relationship, which could hardly be achieved by the 8-4 plan. If present trends continue, the 8-4 plan will be completely replaced by reorganized types in a few decades.

In order that the secondary school may maintain the proper relationship with the elementary school, the following principles should be practiced:

1. The secondary school should receive pupils from the elementary school without requiring any set standards of achievement.
2. Close articulation should be maintained between the two divisions so that no factors in the school system will impede the orderly progress of youth.

3. Reorganized schools, especially the undivided junior-senior high schools, are the best for facilitating closer articulation and meeting the needs of youth.

4. Reorganization alone will not achieve articulation, but it should aid in helping the school fulfill its functions of guidance and exploration and of providing an enriched curriculum of activities and experiences; should prevent duplication in the curriculum; and should give pupils an opportunity to study secondary-school subjects one or two years earlier.

5. Educational policies pertaining to the junior high school should be broad, flexible, and democratic. A few specific ones are:

a. Promotion should be based on factors other than set standards of achievement. Save in unusual circumstances, pupils should not be required to repeat a subject.

b. Promotion should be by subject rather than by grade.

c. Sex segregation should be practiced in few, if any, subjects.

d. Departmentalization should be introduced gradually.

6. The type of organization for a school system should be determined locally after a study of the needs of pupils and the local conditions for meeting them; however, the welfare of youth should be given primary consideration, rather than administrative convenience or economy.

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6

SECONDARY EDUCATION'S BOUNDARIES: HIGHER EDUCATION

The aims, functions, and purposes of the three divisions of our school system, elementary, secondary, and higher, are not fundamentally different. All have the same general aims but differ in the emphasis placed upon various phases. The elementary school is concerned with all youth and aims to create a literate people and teach fundamental principles basic to further learning; the secondary school furthers these aims, is beginning to be extended to all youth, and furnishes a foundation for vocational training. Colleges and universities are designed to give advanced education for those who are to fill professional, managerial, and technological positions and to provide further general non-vocational education.

The late President L. D. Coffman of the University of Minnesota gave the following as the characteristics and functions of a state university:¹

1. To advance learning through study, research, and inquiry into various fields and maintain freedom to learn.
2. To advance personal culture.
3. To elevate the aesthetic and personal ideals and practices of students.
4. To disseminate knowledge, especially to the adult population.
5. To develop and train leaders.
6. To gain an understanding of society.
7. To give instruction in subjects designed to fit one for the practice of some vocational skill.

¹ L. D. Coffman, Building a State University, *Journal of the American Association of University Women*, 29 (January, 1936), pp. 67-72.

The President's Commission on Higher Education states three principal goals for higher education which should come first in our time:²

1. Education for a fuller realization of democracy in every phase of living.
2. Education directly and explicitly for international understanding and cooperation.
3. Education for the application of creative imagination and trained intelligence to the solution of social problems and to the administration of public affairs.

DEVELOPMENT OF HIGHER EDUCATION

Early American universities. The founders of Harvard in 1636 merely transplanted the European idea of a university to America, with Cambridge as a model. The curriculum of Harvard in 1642 consisted of logic, metaphysics, ethics, politics, mathematics, astronomy, Greek, dialectic, declamation, Chaldean, and translation of the Bible from the Hebrew to the Greek into Latin. For the first century the enrollment never exceeded 20 students. The chief purpose and aim was to train boys for the ministry.

The College of William and Mary, founded in 1693, was established by the Church of England so that the church of Virginia might have "ministers of the gospel." Yale, a Congregational church school, was modeled after the University of Edinburgh. It started in 1701 as a "collegiate institute" and became a college in 1745. Its aims included training for the "civil state" as well as for the ministry. The University of Pennsylvania grew out of Benjamin Franklin's Academy, founded in 1751, and is one of the few early colleges which does not owe its existence to the zeal of religious organizations to train youth to be Christian ministers.

Denominational universities. As various denominational groups increased in membership, they established schools to train ministers in their own faith. Besides Harvard, Yale, and William and Mary, the following denominational schools were established before the Revolution: Princeton, founded by the Presbyterians in 1746; Dartmouth, by the Congregationalists in 1769; King's College, now Columbia, founded by the Episcopalians in 1754; Brown University, founded in

² "Higher Education for American Democracy," Vol. I, p. 8, Establishing the Goals, U.S. Government Printing Office, Washington, D.C., December, 1947.

1764 by the Baptists; and Rutgers in New Jersey, founded in 1766 by the Dutch Reformed Church.³

These schools were supported largely by private contributions and fees and were obliged to seek their charters from England. The students were younger than college students of today, the average age of entering being $15\frac{1}{2}$ years, or what is now regarded as secondary-school age.

Slowly these schools became nonsectarian in character, their aims became broader, and their curricula expanded to meet the needs of students not preparing for the ministry. They are regarded now as church-related schools.

The rise of state universities. After the Revolutionary War the various states soon undertook the responsibility of articulating or unifying all the educational institutions of a state under one head called a "University of the State." This was a much broader concept than that usually thought of when one thinks of a state university. This was done in New York in 1784, and today all educational agencies supported by that state are under one institution known as the "University of the State of New York." In Louisiana, an attempt to start the University of New Orleans failed. In Michigan a similar plan succeeded temporarily. The idea perhaps came from France, which has the Imperial University of France, the central authority of all the schools of the nation.

From 1780 to 1830, 65 colleges and universities started in the United States, and from then to 1900 the growth was more rapid. The Federal government aided the movement by the passage of the Morrill Act in 1862, which established the "land-grant colleges," which still receive funds from the Federal government. There is a total of 69 such schools.⁴ In 1952, there was a total of 665 public and 1,203 private universities, colleges, and professional schools in the United States.⁵ Some of the reasons for this growth were (1) an acceptance by the state of the idea that control and support of education were essential to the stability of democracy; (2) an expansion of the cur-

³ Frederick Eby and Charles Arrowood, "The Development of Modern Education," pp. 21-22, Prentice-Hall, Inc., New York, 1936.

⁴ Land Grant Colleges and Universities, *U.S. Office of Education Bulletin 1*, 1947.

⁵ *College and University Bulletin*, 4 (January, 1952), Association for Higher Education, National Education Association, p. 3.

ricula to include the training of servants for the state rather than the narrower aim of training ministers for the Church; (3) a separation of the Church and state in education; (4) a country growing and developing in industrial, economic, and political activities; and (5) a recognition of the necessity of having three divisions to the educational system: elementary, secondary, and higher, each of which is essential.

College enrollments in the United States. From 1890 to 1940, college enrollments in the United States increased from 156,756 to 1,494,203

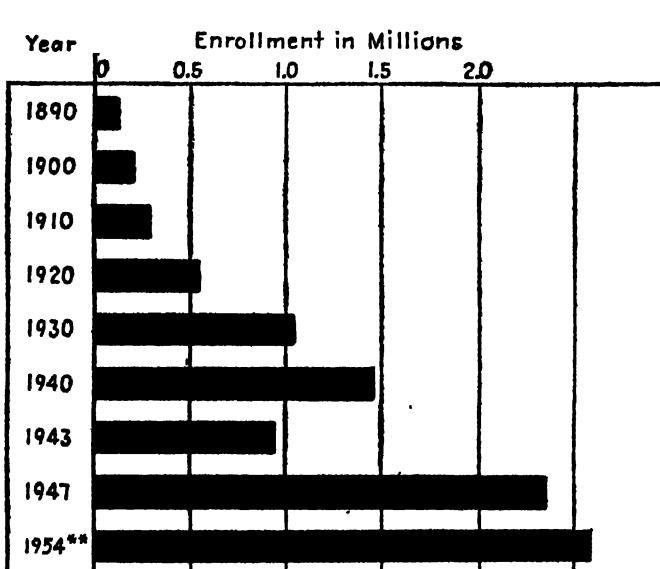


FIG. 7. College enrollments in the United States from 1890 to 1954. [Data from *Higher Education*, 4 (December, 1947), p. 1; ***College and University Bulletin*, Association for Higher Education, National Education Association, 7 (Oct. 1 and 15, 1954), p. 4; and Biennial Survey of Education, 1942-44, U.S. Office of Education, 1947, p. 23.]

(Fig. 7). This was the highest peak reached until after the Second World War. Immediately following 1940 and for the next four years, enrollments dropped, but at the close of the war veterans began returning to college in large numbers, most of them taking advantage of the Servicemen's Readjustment Act of 1944, commonly called the "G.I. Bill of Rights." College enrollments increased so rapidly during the years 1945 to 1947 that the total reached 2,340,000 students, of which about half, or 1,080,400, were veterans. Following this year, enrollments declined each year until 1951; they then started increasing.

For the school year 1954-55, there were 2,533,000 students enrolled, representing an increase over the previous year. The greatest gain was at the freshman level and the total increase was 3.5 per cent over 1953-54.⁶ Veteran enrollments decreased from 40 to 17 per cent. The popularity of colleges is also shown by the number of graduates in recent years. In 1953, 304,857 graduated from college with bachelor's degrees, 61,023 with master's degrees, and 8,309 with doctor's degrees. Predictions are that the increase in enrollments will continue for several years and that by 1960 total enrollments will approach 3,500,000. The bases for the prediction are:

1. Heavy enrollments in secondary schools, preparing more persons for college.
2. Increased birth rates, reflected in college attendance.
3. Continued prosperity, making it possible for more to attend college.
4. Increased popularity of colleges as they meet the needs of more persons.
5. Demands of industry for more highly trained persons.
6. Increased demands for professional services.

Before the war, the percentage of college students who were women was about 39. In 1944, women made up 61 per cent of the total; in 1946-47, this percentage dropped to 32; in 1952, it had increased to 35.⁷ These percentages indicate that men were drawn from colleges in great numbers for military service and that higher learning has attracted more men than women in the past except in teachers colleges, in which there is a larger number of women than men.

Reasons for increased college enrollments following the war. The great increase in college enrollments following the war has been likened to the rapid growth of the high school after about 1880. Some of the reasons for this growth were:

1. Veterans who were formerly enrolled in college returned to complete their training.
2. Veterans enrolled in college for the first time partly or wholly because of the G.I. Bill of Rights who otherwise would probably never have attended college.

⁶ *College and University Bulletin*, 6 (Dec. 1, 1953), p. 3, and 7 (Oct. 1 and 15, 1954), p. 4, Association for Higher Education, National Education Association.

⁷ *National Education Association News*, Oct. 10, 1952, p. 3.

3. New students entered as freshmen who were prevented from entering immediately after finishing high school because they were inducted into service. This number had accumulated for several years.

4. Normal growth reasons, such as a greater number of high-school graduates eligible for college, accessibility to college, a change in college curricula which made them meet the needs of a larger number of persons.

The majority of the veterans enrolled in colleges elected to pursue courses of a vocational nature rather than to follow a general pattern of liberal arts. Those colleges or courses which enrolled the greatest numbers and which had the greatest increases were business, engineering, and agriculture. Promise of immediate returns in some vocation was a strong motivating factor for the majority. They had been in military service for several years when they normally would have been in school or in industry, and although many may have desired a more liberal background before specialization, they felt that it was a luxury they could not afford.

Major provisions of the G.I. Bill of Rights. The major provisions of the G.I. Bill of Rights⁸ were as follows:

1. Any veteran of the Second World War who served 90 days or more, or who was discharged for disability before 90 days, may attend any school or educational institution approved by the Veterans' Administration, for a period of 12 months plus his length of service, and is eligible to receive government benefits for a period not to exceed 48 months.

2. The benefits are: a subsistence allowance, all tuition, and books and supplies needed in instruction. The tuition is paid to the school on an actual cost basis.

3. This aid may be withdrawn at any time the veteran does not do satisfactory work or his conduct is not satisfactory.

4. The veteran is free to choose his own college and curriculum and to carry the same courses and load as nonveterans.

In order to aid the returned Korean War veterans, the GI Bill was extended to include them.⁹ At the same time, several student-aid bills

⁸ Correct title: Public Law No. 346, 78th Congress: Servicemen's Readjustment Act of 1944. See C. K. Morse, Interpretation of the Servicemen's Readjustment Act, *Higher Education*, 1 (February, 1945), pp. 1-4.

⁹ Public Law 550, 82d Congress. See *College and University Bulletin*, 5 (Jan. 15, 1953), Association for Higher Education, National Education Association, p. 1, and The New GI Bill, National Education Association, 41 (September, 1952), p. 344.

are being considered which would extend aid to all worthy youth and which would correct some of the controversial issues in the GI Bills. The provisions of the new GI Bill, Public Law 550, covering Korean War veterans, have caused disagreements among colleges because they treat all veterans alike, with the same payments to "similarly circumstanced" veterans, regardless of whether the institution they attend has a high or low tuition.

Effect of increased college enrollments on the high school. The large increase in college enrollments will have a tendency toward lowering the value of a high-school diploma in the industrial world. Whereas formerly a high-school education was required in many industries and vocations, as a larger number of college-trained persons become available they will be preferred to those with only high-school education. It will likewise make it much harder for high-school graduates to compete in many fields because they will work with college graduates. Salaries will be affected, for if there is no shortage of college graduates, those of less training will draw less pay. The ultimate effect may mean a further increase in the number of high-school graduates who will continue their schooling.

If this latter trend develops, the largest group in high school may be the college-preparatory group, and since specialized training will be taken beyond high school, most specific vocational training will be omitted from the high-school curriculum of the future. Those not prepared for college will perhaps have to be content with simple unskilled jobs, for most white-collar, managerial, professional, and skilled vocations will require college graduates.¹⁰

ARTICULATION OF SECONDARY AND HIGHER EDUCATION

The problem of articulating the high school and institutions of higher learning is not new. Because of the fact that the three divisions of our school system were established more or less independently of each other, problems of unifying them were inevitable. Inarticulation resulted because of an overlapping among divisions, a lack of continuity, gaps, and an indefinite concept of the purposes of each division. The greatest problems of articulation are concerned with the curricu-

¹⁰ Charles M. Armstrong, *Increased College Attendance and the High School*, *Clearing House*, 21 (November, 1946), pp. 139-142.

lum, which should be adjusted to the pupil in the light of the purposes of each division.

During the time of the Latin grammar school, there were few problems of articulation, for the purpose of the secondary school was largely to prepare boys for college entrance. Problems developed with the coming of the academy and high school, because of the increased enrollments and the increased expansion and development of colleges. These changes were partly a cause and partly the result of increased enrollments and expanded curricula and a change in the aims, functions, and purposes of each institution.

Factors encountered by the high school in securing articulation. The increased secondary-school enrollment has brought into the school pupils with different ambitions and intentions concerning their futures after graduation. Roughly speaking, there are two classes: those who will plan or are planning to attend other schools after graduation and those who will plan or are planning to enter industry immediately after graduation. It is impossible to divide all pupils into these two definite groups, for many who intend to go to college fail to do so, and many who did not plan to do so finally go. Among those planning to attend institutions of higher learning are those who in varying degrees are competent for success, those who are doubtful, and those who definitely are not college material. The problem of selecting these pupils and giving them the proper training and guidance is one of the big problems of the secondary school. The percentage of high-school graduates continuing their education into college is increasing, and the indications are it will continue to do so.

Problems also arise from the difficulty in determining the exact purposes of colleges and how they differ. School officials as well as parents are often at a loss to know where to send their children. Academic colleges should be able to make the parents and students understand precisely to what their programs lead, which would make the problem of articulation clearer.

At present, many misfits would be spared the disappointing experience of failure or of starting college and not finishing, if all colleges would more clearly define their purposes and let these be known to both prospective students and their parents. It is easy for colleges to expand their services beyond their facilities in order to attract more students until the original character of the institution is submerged.

Colleges differ in their purposes, in their curricular offerings, and in the abilities of the students attending. An improved guidance program in the secondary school will aid the students in selecting that school which will best give the training desired. The institution is not at fault if a student who wished to be a doctor matriculates in a teachers college, but it is at fault if he is encouraged to enroll or if it tries to train him to be a doctor.

Some of the major difficulties encountered by colleges and secondary schools in securing greater articulation are:

1. Lack of cooperation between colleges and secondary schools.
2. Entrenched opinion in the college faculties concerning entrance requirements.
3. Lack of adequate guidance in secondary schools for pupils who are planning to enter college and aid in preparing them for doing college work.
4. Lack of objective evaluation of already existing entrance requirements.
5. Lack of well-organized guidance work in colleges and universities.
6. Lack of effectiveness in colleges in properly orienting and instructing freshmen so that adjustments can be made more quickly and easily.
7. Lack of instruction in secondary schools in how to study for college courses.
8. Lack of subject standards of achievement in secondary schools.
9. Encroachment of high schools on college subjects.
10. Wide differences in secondary-school standards.

These difficulties are those which have been mentioned by colleges and secondary educators. Some are more valid than others, and some exist only in some schools and in some places. The one that seems to be most valid is the lack of adequate guidance for those preparing to enter college and of some specific preparation for doing college work. Those planning to enter college should be aided in selecting schools which will meet their needs, should be instructed in independent study, should be guided into courses which provide preparation for the courses which will be pursued in college, and should be given aptitude tests so that each will have some knowledge of his own capabilities. If these practices are adopted, better articulation will result.

The methods most frequently employed by institutions of higher learning for helping freshman students make better adjustments are freshman, or orientation, week; orientation courses; educational guidance based on entrance examinations; subcollege courses for those who

show deficiencies in certain areas, as reading and English; ability grouping in some subjects; and review courses.

The chief problems recognized as causing the greatest amount of student difficulties after entering college are (1) lack of sufficient mental capacity; (2) inadequate or faulty study habits; (3) improper adjustment to courses; (4) lack of definite objectives and driving power; (5) distractions and worries; (6) lack of proper outlets—physical, social, and mental; and often (7) too many extracurricular activities.

WHO SHOULD ATTEND COLLEGE?

As colleges are now designed, only a few can profit by the instruction given. Originally, universities were designed to train only in the major professions: medicine, theology, law, and teaching. This was true until a few generations ago. Gradually it was realized that the service of a university should be extended to include the training of other public leaders and other vocational groups at public expense, for their training benefited society as a whole. The increasing complexity of society demanding a greater variety of leaders accentuated the movement, and new courses and new departments were added. This expansion increased also as learning and knowledge increased. As a body of subject matter was developed, new courses were offered meeting the needs of a greater number of people, so that today universities offer instruction in law, medicine, teaching, the ministry, engineering, business, agriculture (including home economics), and pharmacy, while a few are extending their services to the training of photographers, mechanics, policemen, firemen, barbers and beauticians, and embalmers. Those who intend to pursue vocations of this nature or professions, and who have the aptitude, interest, and drive to profit from the courses offered, should attend colleges and universities that can prepare them in these fields.

The increase in the number of college students is exerting a pressure on colleges to modify present courses, add new courses, and build new curricula in order to meet the demands of students. Although there is still a strong tendency to cling to the traditional pattern of offerings and discourage any student from attending who would not profit by this pattern, gradually this is being broken down and the curricula are being modified to meet the needs of those who attend.

Reasons for attending college. Many students attend liberal-arts colleges for reasons other than preparation in specific vocations. The benefits they secure are in terms of increased cultural training, social training, and contacts or in the social prestige derived. Although such advantages are desirable, only a few can afford to attend college for these reasons. If there were no other values, the luxury would be an expensive one, not only to the individual but also to the state. Since the students pay only a part of the cost of maintenance and instruction, the state feels justified in meeting the additional expense for this group, for its profits indirectly, because, regardless of the student's motives, there are certain desirable concomitant outcomes produced along with the student's primary ones. These are, or should be, increased health, proper attitudes, ideals, and skills fitting one for home, civic, and community leadership, and a general foundation for some vocational pursuit.

If the colleges, like the high schools, attempted to meet the needs and capacities of all who attended or desired to attend, all youth could profit by attendance; but since they do not, only a select few should attend. After the United States has provided secondary education for all, she may extend her goals to include training beyond secondary. If this time ever arrives, it will be necessary for the colleges and universities to provide instruction that will meet the needs of all who attend. In fact there is some evidence that some sections of the country are about at the point of providing at least junior-college work for all.

Are the right persons going to college? Since there is an increasing number of persons going to college, the questions are often asked, "Are the right persons going to college?" "Is a college education worth the cost?" and "What do college students learn?"

To answer these questions, a study was sponsored by the Carnegie Foundation for the Advancement of Teaching of the relations between secondary and higher education in Pennsylvania.¹¹ Data were secured for thousands of students who took an intelligence test designed to measure mental quickness, accurate information about a wide variety of general facts, and general culture. From the test results one general conclusion is outstanding.

When 6,000 high-school graduates who went to college were com-

¹¹ Goodwin Watson, *How Good Are Colleges?* Pamphlet 26, Public Affairs Committee, New York, 1938.

pared with 12,000 who went to work, one-fourth of the noncollege group were better than the median of the college group. In other words, in order to get the highest levels of ability into college, it would be necessary to replace the lowest 50 per cent of those attending with the upper 25 per cent of those not attending. If students of the highest academic ability are the ones who should go to college, then the colleges are getting only about one-half the high-school graduates they should. Those who did not attend college but desired to do so gave financial handicaps as the chief factor that kept them from attending.

Since this study was made, college enrollments have doubled, the increase being mostly due to the attendance of veterans. Studies made comparing veterans with nonveterans show that the former are doing a quality of work equal to or superior to what nonveterans are doing.

Hamilton, from an investigation of 12 institutions of higher learning, including Dartmouth, Yale, Harvard, Wooster, Wisconsin, Chicago, and Tennessee, reported that the evidence warrants the conclusion that veterans are equal if not superior in scholastic standing and attitudes to nonveterans.¹²

A study made at the University of Arkansas, covering a 12-year span, compared each freshman class with others and with national norms on the Thurstone and Thurstone Psychological Tests.¹³ Although the enrollments at the university more than doubled during this period, no significant differences were noted in the mean scores. Likewise, national averages varied little from year to year even though enrollments for the nation more than doubled during the period.¹⁴

Robert L. Johnson in commenting on increased enrollments pointed out that scholarship is not diluted in proportion to the increased enrollment. He added that it is futile for anyone to ask who should go to college; the question is, "Who are coming to college, and what are we going to do about it?"¹⁵

The attitude colleges should take is to admit all who meet entrance requirements who want training beyond high school and to build curricula to meet their needs.

¹² Horace E. Hamilton, *How Good Is Our G.I. Student?* *Educational Forum*, 11 (January, 1947), pp. 213-222.

¹³ Published by the American Council on Education, Washington, D.C.

¹⁴ Unpublished paper by one of the authors.

¹⁵ Robert L. Johnson, *Should Everyone Go to College?* *Progressive Education*, 23 (April, 1946), pp. 214-217ff.

COLLEGE-ENTRANCE REQUIREMENTS

During the Colonial period, entrance to college was based almost wholly on oral examinations and conferences with school officials. As the number of universities increased, the oral examination was changed to a written one and this system lasted throughout the nineteenth century. Besides the examinations, candidates were required to present entrance credits from a secondary school. Until 1850, only eight subjects were accepted, and only six more were added by 1875. From 1640 to 1847, the subjects accepted first by Harvard, Yale, Princeton, and Michigan for entrance to the A.B. course were geography, English grammar, algebra, geometry, and ancient history. After the middle of the nineteenth century, newer subjects began to be accepted, such as modern United States history, physical geography, English composition, physical science, English literature, and modern languages.¹⁶

Since 1875, many new subjects have been added to the accepted list of entrance requirements. The usual requirement, in terms of subjects, which was in common practice in 1912 and is still in vogue in many colleges, consists of 3 units of English, $2\frac{1}{2}$ units of mathematics, 1 unit of science, and 1 unit of social science. Fifteen units were required, and the number of courses prescribed was 10.2.¹⁷

In the last two decades, there has been a tendency to liberalize the entrance requirements and accept candidates on bases other than subject-matter requirements. However, studies made by Gladfelter, the National Survey of Secondary Education, the Research Division of the National Education Association, and Brown and Proctor reveal that the colleges are still rigid in their entrance prescriptions. A liberalization of these tendencies will do much to free the high schools in selecting curricular content.

Methods of admission to college. Gladfelter¹⁸ made a survey of entrance requirements for admission, as stated in their catalogues, to 146 American colleges and universities distributed over five regional

¹⁶ Elwood P. Cubberley, "Public Education in the United States," p. 234, Houghton Mifflin Company, Boston, 1919.

¹⁷ A. A. Douglass, "Modern Secondary Education," p. 179, Houghton Mifflin Company, Boston, 1938.

¹⁸ Millard E. Gladfelter, *The Status and Trends of College-entrance Requirements*, *School Review*, 45 (December, 1937), pp. 737-749.

territories. One hundred were privately controlled and 46 publicly controlled; 25 were men's colleges, 28 were women's colleges, and 93 were coeducational colleges.

The criteria generally employed in the selection of college students were:

1. Amount of preparation.
2. Indorsement of the secondary school.
3. Quality of preparation.
4. Scores made on tests of scholastic aptitude.
5. Personal qualifications.

Amount of Preparation. The number of units prescribed for students has been decreasing, and an increasing number of institutions are having no prescribed units. The latter includes reputable liberal-arts colleges scattered from coast to coast. Many institutions of high standing have a tendency to set aside the pattern of required subjects for students of high ability and outstanding promise.

The total number of units required for admission has changed little; most require 15 or 16 units, and the subject fields in which the prescribed units fall remain unchanged.

The requirements in foreign languages and mathematics are decreasing. The emphasis placed recently on the value of social sciences has not yet been expressed in college-entrance requirements.

Quality of Preparation. Of the 146 institutions studied, 138 admit students on certificate. Only 8 institutions require the examinations of the College Entrance Examination Board.

Recommendation by Principal. This is a new factor in determining the fitness of the applicant for college. During the past decade, colleges have begun to rely on information furnished by principals concerning ability and general habits of students. Among the 146 colleges, 91 require personal recommendations. The purpose of this is generally held to be an opportunity for the college to give consideration to students who have high ability and talent along certain lines but who have not excelled in the conventional program and to reject applicants who have good school records but who would not fit into the program of a particular college.

Scholastic Aptitude Tests. Fifty-two of the colleges administer aptitude tests before admission, and 23 administer similar tests after admis-

sion. The two tests most commonly used are the Scholastic Aptitude Test of the College Entrance Examination Board and the Psychological Examination of the American Council on Education.

Personal Qualifications. Forty-six per cent of the 146 colleges require a health examination before admission. The statement of a minimum age was also noted in 18 of the catalogues. Sixteen require a personal interview with an officer of the college. Ninety-six require character recommendations from the principal and in some cases from several additional persons.

Summing up all these facts, it is noticeable that during the past decade colleges and universities have become more concerned with the intellectual ability of pupils than with the subjects completed in the secondary school. The unit and the subject mark as instruments for prediction have given way to such factors as rank in class, sequence in subject fields, and ratings on intelligence, psychological, and achievement tests. The author concludes: ¹⁹

Colleges are becoming more concerned than formerly about the personal strengths and qualities of students applying for admission. The wide acceptance of recommendations by principals and alumni and the emphasis placed on personal interviews suggest a growing interest in individuality in higher education.

Many colleges desire a national distribution of their students rather than a local one. If too high a local standard is employed, the increase will be at the expense of a national distribution. With a local standard, students tend to remain in the same locality after graduation. The College Entrance Board examination method of admission has the effect of creating a more local and less national distribution of students in universities that employ it extensively.²⁰

Study by the National Survey of Secondary Education. The National Survey of Secondary Education revealed that of 517 colleges and universities the method used most often was the high-school transcript, used by 63 per cent of all schools. The next most frequently employed methods were by the College Entrance Board examination and an examination by the institution, 26 per cent each. The high-

¹⁹ *Ibid.*, p. 749.

²⁰ Walter J. Greenleaf, *College Entrance Requirements*, *School Life*, 22 (June, 1937), pp. 303, 316.

school diploma was used as a sole basis for admission by 23 per cent of all schools. One concluding paragraph of this study gives a good summary of practice and trends in college admission: ²¹

In general, the higher institutions included in this study are increasing the number of methods by which students may gain admission. Furthermore, to an increasing extent, institutions are judging applicants on the basis of a combination of criteria. Institutions do not in general abandon old criteria of admission when new ones are adopted; rather, batteries of criteria are set up as opposed to criteria used singly. Few really innovating plans of admission are reported. The trend in general is to increase the number of ways by which students may gain admission, at the same time, in many cases, raising the requirements in single methods.

Study by the Research Division of the N.E.A. A later investigation concerning the types of evidence collected and used by 423 colleges and universities as a basis for admitting and rejecting students was made by the Research Division of the N.E.A. Some of the types most frequently used in order of their frequency were: ²²

1. Transcript of high-school credits and subject marks.
2. Rank in high-school graduating class.
3. High-school principal's judgment.
4. Record of personal interview by member of college staff.
5. Description of character and personality from high school.
6. Results of College Entrance Board examination.
7. Results of intelligence tests.
8. High-school diploma.

Trends in unit requirements. The tendency to require 15 units for entrance is quite general, but the number of prescribed units varies. Most colleges prescribe 5 to 9 units; some prescribe 10 to 14. Although few prescribe all units, or no units, there is a slight tendency for the number to be reduced or toward greater freedom in substituting courses, as, for example, the requirement "three units of science and/or mathematics." The usual subjects required are English, science, history, and mathematics.

²¹ National Survey of Secondary Education, Monograph 10, *U.S. Office of Education Bulletin* 17, 1932, p. 91.

²² From High School to College, *Research Bulletin of the National Education Association*, 16 (March, 1938), p. 79.

PREDETERMINING COLLEGE APTITUDE

If one is asked the question, "What knowledge, habits, and skills are essential for college success?" the usual answer is given in terms of academic subjects pursued in high school. Thus, if one has had the usual pattern of college-entrance units—English, mathematics, social studies, science, and a foreign language—he is generally considered as having the necessary equipment for college success. Such a method of determining college aptitude presupposes that knowledge is measured by the number and kind of courses pursued, that a knowledge of courses pursued in high school is essential in order to profit by courses in college, and that certain high-school subjects fit one better for college than others.

If the components of college aptitude are stated in terms other than the usual admission subjects, the necessary qualifications would be similar to the following: knowledge of the English language, including reading, writing, and speaking; a degree of intelligence sufficient to profit by college courses or to compete with one's neighbors; a certain degree of maturity, health, and ambition and drive enough to continue to graduation. One might add good study habits and knowledge of how to take notes and how to study for and write an examination.

It is generally supposed that those who have earned 15 units from an approved high school have acquired these necessary qualifications. Many have, but many have not. It is a fallacy to assume that study skills exist merely because one has completed high school or that they will carry over into college. It is not the knowledge of the foreign language, science, or mathematics that college instructors want so much as the degree of intelligence possessed by those who can master such courses. There is a wide difference in the average I.Q. of the various curricular groups in high school, the college-preparatory group ranking highest. If one reasons properly from cause to effect, it will become evident that it was not the particular courses or pattern of courses which caused this group to succeed; rather, more intelligent pupils took those courses and more intelligent pupils are more likely to succeed in college than those of less ability.

Many students enter college who have not learned many necessary habits and skills in high-school courses which are more important to

college success than knowledge. For them, it is necessary to learn them while in college or fail. Important among these are skill in reading and study habits. Because of the differences in the quality of high-school courses, many pupils have been able to graduate from high school without devoting much time to study and have failed to develop proper habits and skills in reading. Many colleges have attempted to solve these problems by isolating the poor readers by means of examinations given at entrance and giving them a special reading course. Others have orientation courses and a freshman week designed to induct them into college life.

The high school, however, is not the only place where one can acquire the abilities necessary to college success. Most of the tools of learning are acquired in the elementary school, and by the age of 20 to 21 many persons who never attended high school have all the abilities necessary to success, acquired through informal educational agencies. Some colleges are using a "common-sense viewpoint" as an occasional method of admission. On this basis they are admitting students 21 years of age or over who display sufficient intelligence on psychological examinations, have a desire to complete college, have had vocational experience, and have good moral qualities.

From 1923 to 1943, 54 students who had not finished high school were admitted to the University of Arkansas on this basis. When compared with typical students, their length of stay and the quality of work done warranted the conclusion that colleges may safely deviate occasionally from their stated entrance requirements and admit students on other bases, especially those, as veterans, who had their schooling interrupted by factors beyond their control and who were too mature to return to high school.²⁸

Sending adults to high school would probably not result in the same benefits that would have been realized had they attended when they were of high-school ages. In order for them to enter college or employment most of the states have made recommendations or legal provisions for schools to grant "high-school graduation equivalence certificates" to those veterans who had their schooling interrupted by induction into the Army and who make a sufficiently high score on com-

²⁸ Rudyard K. Bent, Scholastic Records of Non-high School Graduates Entering the University of Arkansas, *Journal of Educational Research*, 40 (October, 1946), pp. 108-115.

prehensive examinations or give credit for military service toward graduation. The examination usually recommended is that prepared by the U.S. Armed Forces Institute known as "Tests of General Educational Development."²⁴ These consist of a battery of five tests covering the student's ability to think clearly in terms of general ideas and concepts in the fields of the social studies, natural sciences, literature, and mathematics and also his ability to express himself correctly and effectively in English. The equivalence certificate may be used in lieu of a high-school diploma for entering certain vocations or for advanced study.²⁵

Educational guidance with respect to college entrance. Counseling and guiding high-school pupils with reference to continuing their schooling beyond the secondary level is just as important as vocational guidance. The general techniques suggested for a guidance program outlined in Chap. 16 are as valuable in educational as in vocational guidance.

That there is a need for such guidance is evidenced by the large number of maladjusted students who enroll in colleges each year. The result is failure, changes in schedules, and ultimate elimination. The N.E.A. survey of guidance practices in 1,600 high schools showed that more than two-thirds of the schools indicated that they followed some kind of regular procedure in advising students as to whether or not they should enter college.²⁶ At the same time, almost half of all students who entered colleges from these public high schools were given no official advice, while only a fourth entered without advice from private and parochial schools.²⁷

Some of the questions and problems confronting pupils who are contemplating attending college are:

1. Should I go to college?
2. Do I have the ability to succeed?

²⁴ Distributed by the Cooperative Test Service of the American Council on Education, New York, N.Y.

²⁵ High School Credit and Diplomas through Examinations and Out-of-school Experiences, Federal Security Agency, U.S. Office of Education Bulletin 7, 1946.

²⁶ From High School to College, *Research Bulletin of the National Education Association*, 16 (March, 1938), p. 71.

²⁷ *Ibid.*, p. 70.

3. Is a college degree essential or desirable in the vocation I intend to follow?
4. What college should I attend?
5. What high-school courses are required for college entrance?

Some vital information which should be secured for each pupil before these questions may be answered are:²⁸

1. Subject-matter marks on high-school courses.
2. A description of personality and character.
3. The number of credits earned in certain subjects.
4. Interests and ambitions as revealed from interviews.
5. Ratings on intelligence tests.
6. The economic status of the family.
7. Special abilities of students in various fields.
8. General health record.
9. Scores on college aptitude tests.
10. Vocational interests and abilities.
11. Attitude toward college.
12. Habits of work, industry, drive, and capability of assuming responsibility and doing independent work.

Studies in the validity of college-entrance requirements. Many studies have been made in attempting to find valid criteria or a basis for predetermining college aptitude. If such a basis could be found, it would have two definite values: it would aid colleges in determining admission requirements and aid the high school in guiding and counseling pupils with respect to college entrance.

Douglass²⁹ studied the academic records of 1,196 students who entered the University of Oregon in the school year 1926-27. Data concerning the high schools and the high-school work of each student were secured. He found that the most valuable single factor in predicting the average college mark is the average high-school mark. Some of the coefficients of correlation found between average marks earned in college and high-school marks were: all subjects .56; science .54; English .49; foreign language .46; social studies .44; mathematics

²⁸ *Ibid.*, pp. 71-72.

²⁹ Harl R. Douglass, *The Relations of High School Preparation and Certain Other Factors to Academic Success at the University of Oregon*, *University of Oregon Publications*, 3 (September, 1931), pp. 12-13.

.44; vocational subjects .35. Further conclusions drawn by the author were:

1. The number of units taken in any one subject-matter field does not furnish any useful basis for predicting college success.
2. Psychological test scores correlated positively with success but were not better than those from separate subjects except the vocational subjects.
3. Principals' ratings on industry, leadership, and citizenship are all positively and materially correlated with college marks, but not in sufficient degree to furnish alone a useful basis for prediction of college marks.
4. Neither the size of the secondary school from which a pupil comes nor the salaries paid his teachers apparently has much to do with the quality of work he will do in college as judged by the marks he receives.
5. Taken over all ranges, the amount of time spent in student noncurricular activities and at work apparently is not associated to any significant extent with the quality of work in college.

These are in close agreement with other investigations. Douglass reports the coefficients of 29 others who found the relationship between high-school and college marks. The median was .55, and of 44 studies reporting the relationship between intelligence-test scores and college marks the median correlation was .45.³⁰

In a project in research in universities conducted by the U.S. Office of Education in 60 universities and colleges concerning factors in the adjustment of college students, a few of the findings were:³¹

1. Participation in noncurricular activities pursued in high school and college, with the exception of athletics, in general accompanies adjustment, and anything which disturbs this activity also disturbs the attainment in scholarship.
2. Delayed admission, or not entering college immediately after high-school graduation, is not associated with poor scholarship. This conclusion is based on data from the University of Washington only and should not be taken as representing the country as a whole.
3. Students who enter college at an age greater than eighteen or nineteen have poorer chances of success. This conclusion does not contradict conclusion number two, for the latter group includes those who graduated from high school at an advanced age and were handicapped in ability.

³⁰ *Ibid.*, pp. 14-21.

³¹ David Segel and Maris M. Proffitt, Some Factors in the Adjustment of College Students, *U.S. Office of Education Bulletin* 12, 1937, pp. 1-49.

4. Results from the University of Washington reveal that to be self-supporting in college is no great handicap, for those who were 100 per cent self-supporting actually made better marks than the non-self-supporting students.

This same conclusion was made by Book at Indiana University. Working students make almost as much credit as nonworking students; they loaf less, study more, and are just as intelligent as non-working students, if not more so.³²

The relationship between high-school marks and college marks for four years, presented in Table 9, are in line with the results of

*Table 9. Coefficients of Correlation between Marks Earned in Various Subjects in High School and Marks for the Freshman Year and All Four Years in College **

<i>Marks in high school in</i>	<i>Correlation of all college marks with high-school marks in various subjects</i>	
	<i>Freshman year</i>	<i>All four years</i>
All subjects.....	.52	.49
English.....	.43	.42
Social studies.....	.37	.37
Foreign languages.....	.33	.31
Science.....	.43	.33
Mathematics.....	.42	.38
Art and music.....	.18	.27
Vocational subjects...	.18	.13
Commercial subjects..	.36	.27

* David Segel and Maris M. Proffitt, Some Factors in the Adjustment of College Students, *U.S. Office of Education Bulletin* 12, 1937, pp. 15-32.

previous investigations. They range from .13 to .49, the highest ones being between all subjects in high school and all subjects in college and the lowest between vocational subjects and all college marks.

³² William F. Book, "How to Succeed in College," pp. 35-54, Warwick and York Incorporated, Baltimore, 1927.

Those subjects supposed to be more potent in assuring college success, foreign languages and mathematics, showed no higher coefficients than others (Table 10). In fact, mathematics in high school was only

*Table 10. Coefficients of Correlation between High-school Marks Earned in Various Subjects and College Marks Earned in the Same Subjects **

Subject	Marks Earned in Same Subject
	in College
English.....	.46
Social studies.....	.38
Foreign language.....	.43
Science.....	.40
Mathematics.....	.43

* From data presented by David Segel and Maris M. Proffitt, *Some Factors in the Adjustment of College Students*, *U.S. Office of Education Bulletin 12*, 1937, pp. 15-32.

slightly more related to mathematics in college than English in high school was to college mathematics. The coefficients were .43 and .40, respectively.

Cooperative tests of the American Council on Education. A Cooperative Test Service was established in 1930 by the American Council on Education in order to provide objective and reliable measures of individual differences in educational achievement for secondary-school and college students. One of their contributions has been the preparation of psychological examinations which have been used by many colleges and universities as a part of their admission program.⁸³ Results from these tests constitute the major source of data for comparing students of one college with those of another in mental-test scores. The wide range in median scores found from one school to another suggests that either there is a wide range of abilities or the tests are not equally adapted to all schools. If this latter conclusion is valid, schools should be cautious in using the results of group intelligence tests in admitting students to college.

The eight-year study and the Southern study. The Commission on the Relation of School and College of the Progressive Education Asso-

⁸³ "Cooperative Achievement Tests," Cooperative Test Service, New York.

ciation was organized in 1930. In 1933, participating schools began their work. The principals of 30 high schools located in various parts of the United States were to recommend certain pupils who were to be admitted to college regardless of their patterns of work. More than 250 colleges and universities agreed to receive these pupils (1,475) on this basis. The colleges were, in effect, telling the high schools that they were trusting their judgment and ability in selecting the most desirable patterns of courses for each pupil and that they would not be discriminated against because of departures from the subjects prescribed for admission.

The aim of the study was to secure data for a further study of conventional entrance requirements and to work toward closer cooperation with colleges. Each principal forwarded to the schools selected by each graduate a history of his high-school activities, including inventories of interests, test results, and other information deemed valuable to college officials in guidance. The work of these students was compared with that of others who met the usual entrance requirements.

The commission completed its work in 1941 when the survivors of those starting high school eight years earlier finished college.³⁴ After studying the students thus admitted, it was found that they made better marks, took the same courses as others, earned more honors, and engaged in more activities.

The Southern Association of Colleges and Secondary Schools conducted a study over the period 1938 to 1945 similar to the eight-year study. It was interrupted during the Second World War, and as a result they were unable to arrive at definite conclusions.³⁵

Since 1940, several colleges in Michigan have been conducting an experiment concerning admission requirements. The colleges agreed to admit graduates from 54 high schools for 10 years without reference to the pattern of subjects which they pursued, provided they were recommended by the school as being among the more able students in the graduating class. Since this study is a phase of the Michigan Study of the Secondary-School Curriculum, it is believed that it will stimu-

³⁴ Wilford M. Aikin, A Brief Report on the "Thirty Schools" Study, *Progressive Education*, 17 (October, 1940), pp. 425-427.

³⁵ Ellis F. Hartford, What Has Happened in the Southern Study Schools? *Proceedings of the Fifty-third Annual Meeting of the Southern Association of Colleges and Secondary Schools*, 1948, Memphis, Tenn., pp. 187-206.

late the improvement of curricula and instruction and will give the secondary schools more freedom in planning their programs.⁸⁶

All evidence seems to agree that no special pattern of subjects need be followed in high school in order to achieve success in college. Success seems to depend not on specific knowledge but on competence to work effectively, ability to use the English language, and qualities of industry, application, and persistence.⁸⁷

DEMOCRATIZING HIGHER EDUCATION

In view of the fact that college enrollments increased so markedly following the Second World War, President Truman appointed a commission of outstanding educators and civic leaders to reexamine our system of higher education in terms of its objectives, methods, and facilities and to recommend means of expanding educational opportunities for all able young people. The committee reported in part in December, 1947. Some of the outstanding recommendations made were:⁸⁸

1. The first condition toward equality of opportunity for college education is that every qualified young person regardless of race, creed, color, or social status is assured of an opportunity for a good high school education in an accredited school.
2. Following broadly the precedent set by the G.I. Bill, the Federal government should aid undergraduate students through a program of scholarships based primarily on individual need. Fellowships for graduate study were recommended also.
3. Tuition and other required student fees should be eliminated in all publicly controlled colleges and universities in the thirteenth and fourteenth years.
4. The commission is opposed to a continuance of college-admission policies which result in discrimination against students on grounds of race, religion, color, sex, or national origin.

⁸⁶ L. S. Waskin, The Michigan Secondary School Agreement, *Bulletin of the National Association of Secondary School Principals of the National Education Association*, 33 (January, 1949), p. 50.

⁸⁷ J. Paul Leonard, Facing the Evidence on College Entrance Requirements, *School Review*, 53 (June, 1945), pp. 327-335.

⁸⁸ "Higher Education for American Democracy," Vol. II, Equalizing and Expanding Individual Opportunity, U.S. Government Printing Office, Washington, D.C., 1947.

5. In order to reduce the high degree of student mortality, curriculum improvements should be made especially in the first two years of college.

6. As an important element in equalization, it is recommended that free, public, community colleges should be established offering courses in general education, having both terminal and transfer value, and vocational courses related to local needs, and adult-education programs of varied character.

The community college may be of various types: public or private, two or four years beyond high school. It is believed, however, that the majority will be public two-year schools. They should be easily accessible to all, at low cost, and should serve the entire community. If a semiprofessional curriculum is constructed, it should be mixed with a goodly amount of general education. Also, the school should be an active center of adult education, emphasize terminal education, should be planned on a state-wide basis, and should have close cooperation with senior colleges.

7. A unified program of general education is recommended. Colleges should find the right relationship between specialization and the transmission of a common heritage toward a common citizenship.

8. Education should be extended for all youth through the fourteenth grade. It is estimated that by 1960, 4,600,000 young people should be enrolled in nonprofit institutions for education beyond the twelfth grade. About 2½ million of these will be in grades 13 and 14. At least 49 per cent of the population has the mental ability to complete 14 years of schooling. Financial assistance should be given to competent students in grades 10 through 14 if they cannot continue without such assistance.

Since the proposed pattern for the community colleges is similar to that of junior colleges, the two may eventually merge into the same type of school, under the name of either community or junior college.

ASSOCIATIONS OF COLLEGES AND SECONDARY SCHOOLS

As colleges increased their enrollments, the system of admitting students only on the basis of personal interviews and written examinations, which was the usual practice in the latter half of the nineteenth century, became cumbersome and inflicted a real hardship on entrants and university officials alike. The University of Michigan as early as 1871 began the practice of admitting students without examinations from all high schools approved by the authorities of the university. This system became popular and spread to other schools, and as a result associations of colleges and secondary schools have been established in all parts of the United States.

There are now six associations (Fig. 8). They are commonly called accrediting agencies, but actually they have no legal power to accredit schools. They do have standards which schools seeking membership must meet or which they encourage schools within the region to meet. They are agencies through which member universities, colleges, and secondary schools work together for their mutual self-improvement.

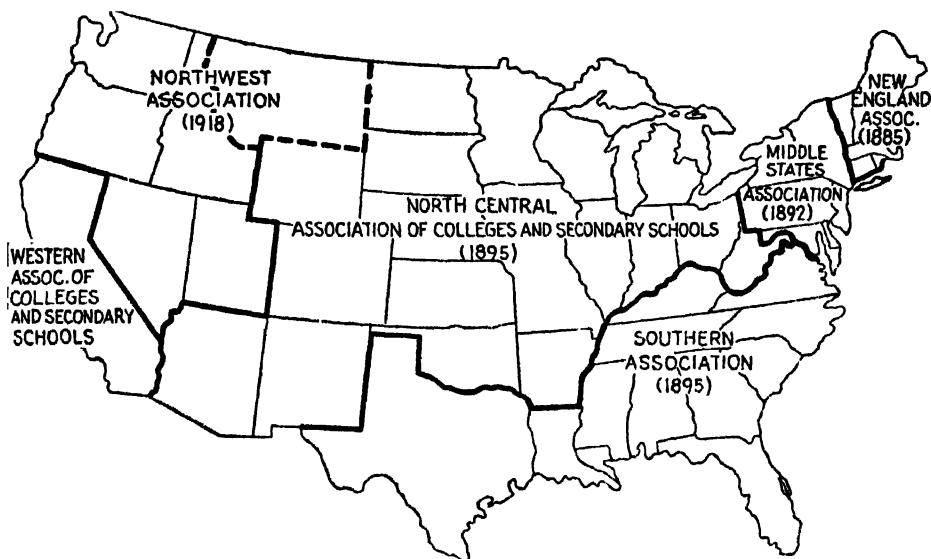


FIG. 8. Associations of colleges and secondary schools in the United States. The dates represent the year of establishment. Montana is affiliated with two associations. [Carl A. Jessen, Cooperative Study of Secondary School Standards, *School Life*, 24 (July, 1939), p. 305.]

Their purposes are to develop and maintain higher standards of excellence, to improve educational programs, to encourage better relationships between schools of the same regional association and between other associations.

A brief description of the associations follows.

The New England Association of Colleges and Secondary Schools. This is the oldest of the regional associations, being established in 1885. The association meets annually to hear instructive addresses and hold conferences on common problems.

Middle States Association. The Middle States Association of Colleges and Secondary Schools was organized in 1892 and is the second oldest. Since 1928, a list of schools meeting state standards has been issued.

North Central Association. The North Central Association of Colleges and Secondary Schools was founded in 1895. It now embraces 20 states from West Virginia to Arizona. For some years, it has made intensive studies of standards and issues a list of membership schools meeting these standards.

Southern Association. The Southern Association of Secondary Schools and Colleges was organized in 1895. Approving schools is one of its most important functions.

Northwest Association. The Northwest Association of Secondary and Higher Schools is the youngest to issue a list of accredited schools. It was organized in 1918. Schools of Alaska and Hawaii are on its list, although they are not represented on its executive committee.

Western Association. The Western Association of Secondary Schools and Colleges is not an accrediting institution. It includes the state of California only.

Schools in regional accrediting associations agree to accept for entrance pupils who are graduates of high schools which have met certain standards as judged by inspectors. Inspections may be conducted by members of the staff of universities or others designated by them. A school may be up to standard one year and dropped from the list later because of a lowered rating. This may be overcome by bringing up the deficiency.

The College Entrance Examination Board. At the time when most colleges were giving subject-matter examinations to all candidates for entrance, a need was felt for uniformity since practices varied so markedly. The College Entrance Examination Board began operating in 1901 for this purpose. Since that time, thousands of students have been examined in all parts of the country. The board does not have the power to admit one on the basis of results obtained but merely conducts the examinations and sends the results to any college in which the student desires entrance. Practically any college in the United States will accept the results of the board's examinations. The number of candidates who take these examinations has increased steadily since 1943.³⁹ In 1947, tests were given to 92,000 students.

Cooperative study of secondary-school standards. In 1933, the six accrediting associations of the United States, which include all 48

³⁹ Ledyard R. Tucker, Number of Candidates Reaches New Peak, *College Board Review*, 1 (Fall, 1947), p. 19.

states, started a cooperative study with the ultimate aim of revising their standards for evaluating secondary schools. The existing standards were to be revised, in the interests not only of those going to college but also of those not intending to go. As the study progressed, the term "stimulation" was frequently used, for the development of standards has a stimulating effect on high schools.

The old standards had become too formalized and stereotyped. Evaluation in terms of physical facilities is by itself not sufficient evidence to determine the competence of a high school. For example, instead of ascertaining whether certain types of records are kept, the new standards determine what use is made of them; besides counting the books in the school library, the amount of use given them is determined.⁴⁰

Aims of the Study. The purposes or aims of the study were expressed or implied in the following questions: ⁴¹

1. What are the characteristics of a good secondary school?
2. What practicable means and methods may be employed to evaluate the effectiveness of a school in terms of its objectives?
3. By what means and processes does a good school develop into a better one?
4. How can regional associations stimulate secondary schools to continuous growth?

Evaluative Criteria. In order to select and validate criteria for evaluating secondary schools, tentative criteria were secured from publications of research studies, committee reports, and other educational material. After a critical evaluation and classification of these data, 200 schools were selected in the United States to cooperate in a try-out period. Each of these schools was evaluated by its own staff members, and each one was also evaluated by a visiting committee of educators. Achievement tests were given to 17,000 pupils; the college success of 13,000 graduates was determined; a follow-up study was made of 6,000 pupils who did not go to college; and finally the judg-

⁴⁰ Carl A. Jessen, Cooperative Study of Secondary School Standards, *School Life*, 24 (July, 1939), pp. 305-306.

⁴¹ "How to Evaluate a Secondary School" (a manual), p. 1, Cooperative Study of Secondary School Standards, Washington, D.C., 1940.

ments of thousands of parents and pupils were secured concerning the schools.⁴²

After a complete study, evaluation, and summary of the collected data were made, final standards were formulated. These appeared in a volume entitled "Evaluative Criteria"⁴³ and were accompanied by a series of bar graphs representing thermometers in a publication entitled "Educational Temperatures."⁴⁴ Each thermometer represents a different phase of the educational work of the school divided into nine divisions: the curriculum, pupil activities, library, guidance, instruction, outcomes, staff, plant, and administration.

Use of the standards is purely optional. Many individual schools have elected to use them as a basis for self-evaluation leading to improvement, and four associations, the Middle Atlantic, the Southern, the North Central, and the Northwestern, have announced their intentions of using them instead of their present standards.⁴⁵

The standards were revised in 1950. The scope of the revision primarily affected the check-list items of the "Evaluative Criteria" and the procedures for carrying out evaluations as described in "How to Evaluate a Secondary School." The revision was fundamental and creative, not merely an improvement of the original work, and was based on criticisms from their use since 1940 when they were first published.

GENERAL EDUCATION

The trend following the Second World War, as evidenced by the colleges entered and the courses pursued by returning veterans, was toward vocational subjects. The veterans, returning to civilian life, were older, had more responsibilities than younger students, and desired the shortest route to vocational efficiency. As the number of veterans attending college decreased and the average age of college students decreased, and as the tempo of life returned to a peacetime pace (notwithstanding the Korean War), attention was turned to the

⁴² *Ibid.*, pp. 4-6.

⁴³ Published by the Cooperative Study of Secondary School Standards, Washington, D.C.

⁴⁴ Published by the Cooperative Study of Secondary School Standards, Washington, D.C.

⁴⁵ Jessen, *loc. cit.*

extent to which students were becoming extreme specialists with increased knowledge in one area and little in others. Criticisms were not advanced against professional and vocational education, for these were considered as important tasks of universities; but it was believed that a strictly specialized course of study was not sufficient for the needs of students in modern life and that, in addition, students should become acquainted with the most important fields of knowledge. Non-professional education for the purpose of giving students a broader background and a wider acquaintance with all areas of human knowledge is called general education.

General education takes various patterns. It is difficult to define general education, and most definitions are negative, stating what it is not rather than what it is. As a result, it has been defined in many ways, and there is little agreement as to just what constitutes general education or what it is supposed to accomplish. All seem to agree that the basic aims of education should be reexamined and that educated persons, in a broad sense, are not being developed through the traditional college curricula. The addition of new courses, an increase in the number of electives, or the liberalizing of courses taught in a formal manner is not sufficient.

Because of this lack of agreement, various methods are being employed to give all students a general as well as a professional education. The traditional method employed by most colleges in order to assure a certain amount of breadth of knowledge is that of requiring all students to pursue courses in several fields, as science, English, social studies, and languages or mathematics, in addition to a field of specialization. Some colleges would increase the number of fields in which each student must enroll in order to assure contacts with various fields of learning. This has been extended to the point where some schools permit no electives or very few.

Some colleges offer survey courses in each of the subject-matter areas. These are nontechnical courses covering the major concepts in each field and their contributions to society. Others believe that subject-matter lines should be crossed and that relationships could be more easily learned if subjects were reorganized and certain courses combined. For example, rather than teaching separate courses in the social sciences, as history, economics, sociology, and political science, one general course should be offered, called social science. In other

fields, courses would have such titles as Biology, The Humanities, Western Civilization, and World Masterpieces. Others believe that general education can best be achieved through the reading of the great books or by listening to lectures which present the major elements of present and past cultures. Still others believe that general education is a matter of method rather than a reorganization of existing courses or the addition of newer ones. They would teach the usual courses offered in colleges, but from different points of view. Each teacher would show the relationships of his courses to the total field of knowledge and would transcend subject-matter lines in planning and organizing or as the occasion demanded.

In what years should general education be stressed? There are differences of opinion not only about how to achieve general education but also as to when it should be stressed in the student's program. Some believe that general education should be stressed in the first and second years of college and that two years of specialization should follow. The two years of general education would provide a background for a better understanding of the specialized education which would follow. This plan would also provide time for further exploration and guidance, a process begun but not completed in the secondary school. In fact, there is some tendency to require two to four years of general education before beginning specialization. In the fields of law and medicine, this has been true for some time. In the field of education, much of the specialized professional education has been advanced to the graduate school, and there is some evidence that the education of all teachers will require five years: four years of general education, including some specialization, followed by one year of professional study.

In those fields requiring only four years of college in preparation for a vocation, as in engineering, business, agriculture, rather than concentrating general-education courses in the first two years of college, some believe that they should be spread over the entire four years of work. For example, under such a plan, a senior in a college of engineering might take a course in English literature or one in psychology or in the fine arts, as music. This is based on the purpose of a general education. If general education is to enrich one's way of life, it is not merely an acquisition, something to be acquired or enjoyed for a brief period, but a process of learning and developing throughout life. The

chances are that if it is spread over a period of years rather than concentrated, it will have greater carry-over value and function throughout the life of each student.⁴⁶

THE JUNIOR AND COMMUNITY COLLEGES

The junior college and the community college have as one of their functions that of providing a more gradual transition from secondary to higher education. In this respect, they are comparable with the junior high school. They are neither wholly secondary- nor higher-education but have elements of both.

The concepts of junior and community colleges and the need for extending secondary education had their origin in the latter part of the last century. However, schools were not established with these concepts until about 1900, and the most rapid growth has been since about 1920. In 1952, there were 586 junior colleges enrolling 576,453 students. Of these schools, 322 were public in control, and 264 were private.⁴⁷

Types of junior and community colleges. Junior colleges may be classified according to the basis for their administration, support, and aims:

1. Those established on a regular college campus and comprising the first two years of college work.
2. Local public junior colleges established and supported by the high-school districts, union districts, or the county as a unit.
3. State junior colleges.
4. Private junior colleges.

Reasons for establishing junior colleges. Some of the main reasons for establishing junior colleges are:

1. *The European analogy.* The *Gymnasium* of Germany and the *lycée* of France have for years been giving students the equivalent of two years of college training, thus leaving the universities free to devote their full time to research and technical training.

⁴⁶ See The General Education Movement, *College and University Bulletin*, 5 (Feb. 1, 1953), pp. 1-4.

⁴⁷ Jesse P. Bogue, ed., "American Junior Colleges," pp. 9-11, American Council on Education, Washington, D.C., 1952.

2. *To push all secondary and many elementary courses out of the colleges.* Studies have shown much overlapping and similarity between the elementary courses in college and the same courses in high school. In many cases, the content and even the textbooks used were the same, and very little difference was observed in the method of instruction or the standards and quality of work.

3. *To relieve the overcrowded colleges.* Since 1890, the enrollment in colleges has increased from 74,000 to over two million students in 1954, or an increase of over thirty times. In many colleges, appropriations, building space, and number of members of the faculty have not kept pace with the increased enrollment, which has resulted in overcrowded buildings and heavy teaching loads. This crowding could be cared for by the junior colleges.

4. *The desire for additional education closer at home.* Many parents are reluctant to send their children away from home to attend school until they have reached a degree of maturity which would enable them to be self-reliant.

5. *Financial difficulties.* Some of the weaker four-year liberal-arts colleges reverted to junior colleges when they found that they were not financially able, or did not have a sufficient enrollment, to warrant a four-year program.

Aims and functions of junior colleges. The general purposes and objectives of the junior colleges are:

1. *To democratize and popularize college education.* By making the first two years of college more accessible, many who will not attend or cannot afford to attend at more remote distances will matriculate. Even though they do not later attend a senior college or university, they have the advantage of two years of training beyond the high school.

2. *To provide terminal education to those not desiring to pursue more advanced work in higher institutions but who desire additional schooling beyond the high school.* The curriculum is more liberal than specialized, more general than technical, and it is not the aim of the junior college to give advanced technological training or to fit one for any of the major professions. The aims are nearly like those of secondary education, and the two years may be thought of as a two-year extension of the secondary school.

3. To further the guidance function. By the end of the twelfth grade, many have not adequately explored the various fields of learning—a function of the high school—or have not evaluated their aptitudes and capacities to the extent that an intelligent vocational choice may be made. The junior college provides two additional years for further explorations and guidance. When this is accompanied with an increased maturity, much safer and more practical vocational choices can be made.

4. To provide better articulation and coordination between the senior high school and the university. The transition between high school and higher education is abrupt. Marked changes in methods of discipline are made, placing the pupil on his own initiative and making him responsible for his own conduct. He is also responsible for budgeting his own time and lacks the close supervision he had in high school. Home influence is lacking in most cases, since most must live away from home. The student is likely to find competition keener, the marking, examinations, and instructional methods different, and perhaps the pattern of course work entirely new. The junior college provides an environment in which the student may be gradually inducted into college.

Some of the functions of junior colleges are:

1. They offer courses in general education rather than technological and professional training.
2. They provide lower- or junior-college training for those who plan to attend senior college.
3. They provide adult education, especially in their evening and night classes.
4. They remove matriculation deficiencies for those who do not meet college-entrance requirements.

It is difficult to evaluate the aims of the junior colleges, for they differ markedly among themselves. There is conflicting evidence concerning the extent to which they provide a more gradual transition period between the high school and college because of the differences among schools, students, the type of senior college to which the students transfer, and the courses they take after they transfer. For these reasons, which make objective studies difficult, it is, perhaps, better not

to make generalizations concerning the extent to which they have achieved their functions and stated purposes. The best evaluation of them is the fact that they are growing and are being supported and that the majority who do transfer to other colleges and universities are successful. It must be kept in mind, however, that preparation for senior college is only one of their functions, and, in any evaluation, all aims, purposes, and functions should be considered.

The community college. In recent years, the term *community college* has been used to a great extent to describe a new type of school and also as a new name for junior colleges. This has been done because of the belief that the term *community* is more descriptive of the character of many of the schools than *junior*. According to definition, many junior colleges are community colleges; many are not. A true community college is one that is operated by the community at public expense, although those established as private schools perform in varying degrees the functions of community colleges.

In addition to the purposes of junior colleges, the peculiar characteristics of a community college are:⁴⁸

1. They must render service primarily to the people of the community where they are located.
2. They must be under public control, either local, county, or state.
3. They must be financed through public taxation, either on the local or on the state basis or both; the support may be supplemented by student fees or direct tuition.
4. They must provide work experience for those who must be part-time students.

The general purposes are practically the same as those of the junior college, but, as a result of these unique characteristics, the privately controlled schools are not called community colleges. Furthermore, all public junior colleges may not meet some of the major differentiating characteristics, such as rendering service primarily to the community where they are located.

In order to accomplish these purposes, community colleges must make frequent surveys in order to determine the needs of students; they must constantly attempt to prepare students to live more full

⁴⁸ Jesse P. Bogue, *The Community College*, pp. 49-53, McGraw-Hill Book Company, Inc., New York, 1950.

and satisfying lives; they must attempt to center the adult-education program of the community in the community college; and they must consider work experience or apprenticeship training for those who cannot be full-time students for financial reasons.

Growth of the junior college. The junior college has had a rapid growth since the first ones were established. The number of schools has increased to 586 in 1952, which is a slight decrease since 1948 owing to many schools becoming four-year schools (Table 11). The

*Table 11. Growth of the Junior College from 1900 to 1952 **

Year	Number	Enrollment
1900	7	
1910	53	
1920	195	
1930	429	67,627
1940	575	196,710
1948	652	451,675
1952	586	576,453

* From 1900 to 1930, data were secured from Doak S. Campbell, "Critical Study of the Stated Purposes of the Junior College," George Peabody College for Teachers, Nashville, Tenn., 1929. Recent data from Jesse P. Bogue, ed., "American Junior Colleges," pp. 9-11, American Council on Education, Washington, D.C., 1952.

majority are publicly controlled, and the majority of students attend the public institutions (Table 12). A majority of the private schools are

*Table 12. Public and Private Junior Colleges in the United States, 1952 **

Type	Number	Number, per cent	Enrollment	Enrollment, per cent
Public.....	322	55	498,345	86
Private.....	264	45	78,108	14
Total... . .	586	100	576,453	100

* Jesse P. Bogue, ed., "American Junior Colleges," pp. 9-11, American Council on Education, Washington, D.C., 1952.

controlled by church denominations; the others are nondenominational, nonprofit, or proprietary schools. They have been established in the Western and Middle Western states more than in other sections, although every state has one or more schools.

Although most of the junior colleges are accredited by state departments of education or state universities, in 1952 only 219 of the 586 schools were members of the regional associations of colleges and secondary schools.⁴⁹

Junior-college trends. Some of the trends noted in junior colleges are:

1. In recent years, there has been a notable shift from private to public junior colleges. Since 1940, the number of public colleges has increased from 261 to 322; the number of private colleges has decreased from 349 to 264.
2. The number of pupils attending is increasing rapidly (see Table 11).
3. There is a trend away from regional to local junior colleges. Evidence is available to show that high-school graduates from lower socioeconomic levels enter public junior colleges in the local community in larger proportions than they enter any other type of institution beyond high school. It has also been shown that, the greater the distance from the school, the fewer the number of students who attend.⁵⁰
4. Greater articulation between high school and the junior college is being achieved by more schools being housed with or near a high school.⁵¹
5. The community-college idea is spreading.
6. Junior colleges are now being established outside the United States.

Private junior colleges can make definite contributions which the public schools cannot or will not make: they can develop a religious program; can engage in more experimentation and research; and, owing to the nature of their support, have a greater compulsion to maintain a superior program.

⁴⁹ Jesse P. Bogue, ed., "American Junior Colleges," pp. 9-11, American Council on Education, Washington, D.C., 1952.

⁵⁰ Leonard V. Koos, *Local vs. Regional Junior Colleges*, *School Review*, 52 (November, 1944), pp. 525-531.

⁵¹ B. Lamar Johnson, *Junior College Trends*, *School Review*, 52 (December, 1944), pp. 606-610, and Jesse P. Bogue, ed., "American Junior Colleges," pp. 9-11, American Council on Education, Washington, D.C., 1952.

Guiding principles for securing greater articulation between secondary schools and institutions of higher learning

1. Close articulation should be provided and maintained between secondary schools and universities; therefore:
 - a. College preparatory students should be given special guidance and consideration in secondary schools in order to be better prepared for college work and to make wiser selections of colleges and courses.
 - b. The junior-college division should help provide a transition period and further the guidance and exploration of students.
 - c. Junior and community colleges should give special attention to the aim of preparing those students for the senior college who indicate that they will transfer after graduation.
2. Colleges, considered collectively, should provide for the needs of all high-school graduates who wish to attend; therefore, each should define its purposes and build a program in keeping with them. Since there are various types of colleges, each student should be able to find one that meets his needs.
3. Many students desire schooling beyond the twelfth grade but do not wish to attend a regular college or university; therefore, schools with the concepts of the community college should meet their needs.
4. No subject or pattern of subjects pursued in high school guarantees college success; therefore, methods of admission to college should be many, should be liberalized, and should be flexible.
5. Cooperation between colleges and secondary schools is essential to the best interests of both; therefore, all colleges and secondary schools should strive for membership in one of the regional associations. All schools which do not meet the standards should continue to make improvements based on self-evaluation.
6. Provision should be made to aid financially all worthy high-school graduates who wish to attend college but who are unable to do so because of financial reasons. Federal aid may be extended to include students other than veterans; tuition fees can be lowered and costs of texts and other materials kept at a minimum.

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7

THE RETENTION AND PROGRESS OF PUPILS IN THE SECONDARY SCHOOL

In order to achieve the goal of educating all youth through 12 grades, high schools have been made accessible to the majority of youth; but providing educational facilities alone is not adequate unless youth avail themselves of the opportunities. The present chapter is concerned with the extent to which pupils attend secondary schools and the factors and influences preventing them from doing so.

The extent to which our secondary schools serve the masses of people cannot be accurately portrayed by the total enrollment, for enrollment figures do not reveal the amount of schooling each pupil receives, nor do they take into consideration the elimination after each grade. A true picture can be secured only by observing the secondary-school enrollment in each year and the survival rates from the time of entering high school to graduation.

Retardation is usually associated with and is often a cause of elimination. If the school is properly articulated, there should be little retardation. Elimination and retardation begin in the elementary school. Those eliminated during this period never reach the secondary school; those retarded are overage for their grade when they enter high school.

THE EXTENT OF ELIMINATION

Measures of retardation and elimination. One of the most commonly used devices for showing the amount and extent of retardation is an age-grade table, which reveals the number of persons under-

age, overage, or normal for their grade. This assumes that all pupils should start to school at about the age of six, and complete a grade a year through the 12 grades. Failure of promotion, entering school after six, and nonattendance cause overageness, while entering school before six and grade skipping cause underageness. Both indicate cases of maladjustment, the cause of which cannot be determined by an examination of an age-grade table.

Another method of showing the extent of retardation is by progress ratios. Normal progress is a grade a year, which, expressed as a ratio, is 1 divided by 1, or 1.0. The denominator represents the number of years in school and the numerator the grade progress. A retarded pupil's ratio would be less than 1, while a ratio greater than 1 would indicate acceleration.

Elimination can be measured by the actual number of pupils in each grade compared with the preceding one or by the percentage each year's enrollment is of the preceding grade. Often the percentage is computed on the basis of the enrollment in the first grade or the first year of high school.

The extent of elimination from grade 1 through college. The extent of elimination from grade 1 through college is shown in Fig. 9. These data were secured by starting with the enrollment of the first grade in 1938 and noting the actual decrease in numbers for each successive year through elementary school, high school, and college. Following one class through the entire school system gives a truer picture of elimination than by noting the number enrolled in each grade for any given year, for enrollment figures for any one year are affected not only by withdrawals from school but also by changes in the school population. It will be noticed that the number of pupils in the ninth grade is greater than the number in the eighth. This paradox is due to the fact that, at the time this group was in the seventh grade, there were still many schools of the South which had only seven years in the elementary division, and the eighth year of schooling for them was the first year of high school, which was the ninth grade for the majority of pupils. Determining by interpolation the number who would be in grades 7, 8, and 9, the graphic picture reveals the following situation: For every 100 who started in the first grade in 1938, only 55 finished the eighth grade, 51 entered the ninth, 39 started in the senior year of high school, and only 34 remained to graduate in

1950. Of these 34 graduates, 13 entered college, and it is estimated that 6 graduated.

These data are for the United States as a whole and do not reveal local situations unless they conform to the average. In some communities, the amount of elimination is slight from the first through the

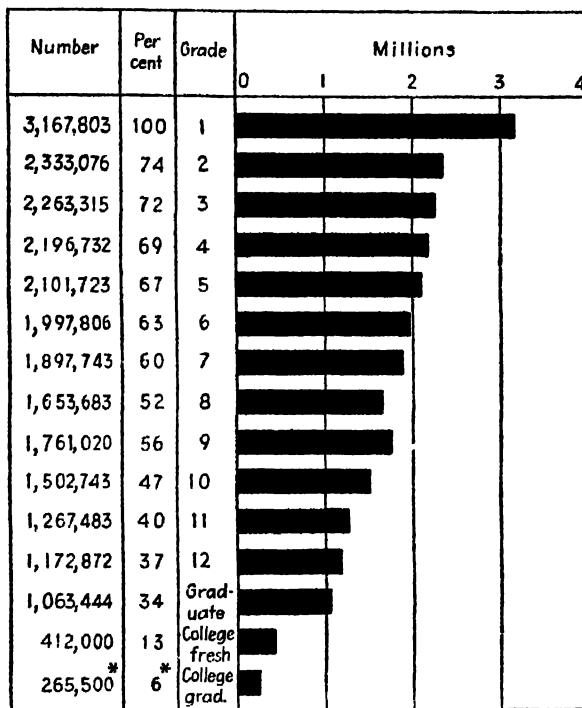


FIG. 9. Elimination of pupils from grade 1 through college, starting in 1938 in grade 1. *Estimated. (Data secured from Biennial Survey of Education, 1949-50, U.S. Office of Education, 1952, p. 46.)

twelfth grades; in others, percentages smaller than the average reach the higher grades.

Trends in the holding power of the high school. Although the holding power of the American school system is exceedingly low, a comparison with previous years shows that the situation is gradually improving. Survival rates from the fifth grade through high school are shown graphically in Fig. 10. If there were no elimination, the curves would be straight lines parallel to the horizontal axis. The same figure reveals the increase in the holding power of the high school since 1909. In 1950, for each 1,000 who started in the fifth grade in 1936, 504 graduated from high school, while in 1909, it was estimated by Ayres,

only 100 graduated out of each 1,000 who started in the fifth grade in 1902. The data collected by Ayres and Phillips constituted a meager sampling of the United States, while those of Foster represent the total enrollment of all schools of the country reporting to the U.S. Office of Education. The comparison indicates increased holding power to the twelfth grade.

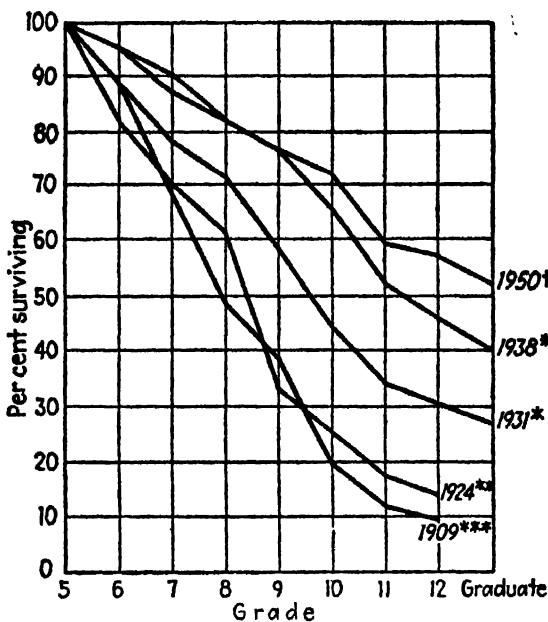


FIG. 10. Survival rates for public schools, fifth grade through high-school graduation. [*Emery M. Foster, *School Survival Rates*, *School Life*, 23 (March, 1938), pp. 265-266. **F. M. Phillips, *U.S. Bureau of Education Bulletin* 38, 1924. ***L. P. Ayres, "Laggards in Our Schools," p. 71, Russell Sage Foundation, New York, 1909. †From Fig. 9.]

The extent of elimination and the trend toward greater holding power of the high school are also shown by the percentage of the total public-school enrollment in high school. If there were no elimination from the first through the twelfth grade, one-third of the school population would be found in the upper four years and two-thirds in the eight years of the elementary division. As shown in Table 13, the percentage of the total public-school population enrolled in the upper four high-school grades was 22.6 in 1950 for the country; in 1870, only 1.2 per cent of the total public-school enrollment was found in the high school. The percentage decrease since 1940 was due to the

*Table 13. Percentage of the Total Public-school Enrollment in High School from 1870 to 1954**

Year	Per Cent
1870	1.2
1880	1.1
1890	1.6
1900	3.3
1910	5.1
1920	10.2
1930	17.1
1940	26.0
1950	22.6
1954 †	27.0

* Emery M. Foster, *Statistical Thimbsticks, School Life*, 22 (May, 1937), pp. 277-278, and *Biennial Survey of Education in the United States, 1949-50*, U.S. Office of Education, 1952.

† Estimated.

heavier enrollments in the elementary school and decreased enrollments in secondary, which resulted in a decreased proportion in the high school.

A secondary-school system may consider itself up to the average of the country as a whole if survival rates are as follows:

First year.....	100
Second year....	84
Third year....	71
Fourth year....	63
Graduate	57

For every 100 who start to school in the ninth grade, only 57 will graduate.¹

Period of greatest elimination. One of the criticisms of the 8-4 plan of organization was that the eighth grade provided terminal education for many and caused a great amount of elimination between the eighth and ninth grades. Reorganization has been one of the factors in reducing the elimination between these grades. As shown in Table 14, in 1927 only 80 per cent of those who finished the eighth grade enrolled in high school. In 1950, this number had increased to 93 per cent.

¹ *Biennial Survey of Education, 1949-50*, U.S. Office of Education, 1952, Chap. II, p. 46.

*Table 14. Percentage of Those Finishing the Eighth Grade Who Enrolled in High School from 1927 to 1950**

Year	Per cent	Year	Per cent
1927	80.0	1940	92.1
1930	89.8	1944	92.0
1933	92.1	1950	93.0

* Emery M. Foster, School Survival Rates, *School Life*, 23 (March, 1938), pp. 265-266; Biennial Survey of Education, 1942-44, U.S. Office of Education, 1947, Chap. I, p. 8, and 1949-50, Chap. V, p. 46.

The number of graduates. Perhaps the best criterion for determining the extent to which secondary education has been extended to all

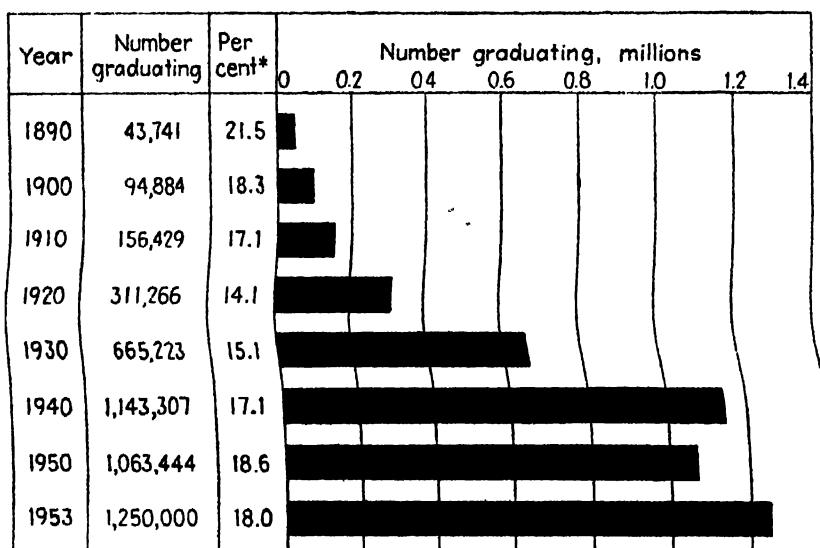


FIG. 11. Students graduating from high school from 1890 to 1953. *Percentage graduates are of the total high-school enrollment. [Data secured from Biennial Surveys of Education; 1932-34, 1944-46, 1949-50, U.S. Office of Education, and *College and University Bulletin*, 6 (November, 1953), Association for Higher Education, National Education Association, p. 1.]

youth is the number of those who graduate. Although it is better to have attended high school a few years than never to have enrolled at all, it is not unsound to assume that values are gained in proportion to the length of time attended. Growth is a slow process and cannot be

hastened beyond certain limits; furthermore, the secondary-school curriculum is so organized that four years are usually required to complete a cycle of activities of learning and for the school to fulfill its legitimate functions.

In Fig. 11 is shown the increase in the number who graduated from high school from 1890 to 1953. The number has increased from 43,741 to 1,250,000. The increase in the number of graduates is to be expected since the secondary-school population has also increased. It will be noted that the number of graduates in 1950 was less than in 1940 owing to the decrease in high-school enrollments for the period prior to 1950.

How many high-school graduates continue their education? Approximately 46 per cent of the students who graduated from high school in the spring of 1953 attended college during the school year 1953-54. In 1921, the earliest year for which these data were available, about 31.4 per cent of the high-school graduates enrolled in college. The number of students attending college for the first time in 1953 was an increase of 7.2 per cent over the previous year.² These data indicate that the holding power of schools is increasing beyond the high school.

The gap between educational goals and practices. Among the educational goals accepted by the people of the United States is that of secondary education for all youth. The extent to which this goal has been achieved is revealed by the data presented in Fig. 9 and in Tables 12 and 13. These data reveal the wide gap between goals and practices—that we did not get all the youth who should have been there into high school and also that many who did enroll were not retained. Although there is a gap between goals and practices, progress toward the goals is being made.

FACTORS ASSOCIATED WITH EARLY SCHOOL LEAVERS

The exact cause of pupils' leaving school before graduation is difficult to determine. Studies of withdrawals in one school cannot be applied directly to individuals in another school, for the causes of a pupil's leaving school can be determined only by a direct study of his

² *College and University Bulletin*, 6 (Nov. 1, 1953), National Education Association, p. 1.

case. This is not always easy, since the reasons given by a pupil for leaving may not be the real ones. Usually, many factors, rather than a single factor, cause withdrawal, and pupils may not know themselves why they quit school.

In general, withdrawal before graduation is accompanied with dissatisfaction, maladjustment, and frustrations. Schools at their best, like the world itself, are imperfect, and, because of this, pupils are constantly being frustrated. They may fail to achieve good academic marks or popularity, may be forced to engage in uninteresting tasks or to compete with those who are more capable than themselves, or may desire to attain goals beyond their capacities. These factors cause frustrations, and those who quit school because of them are merely reacting to difficulties by withdrawing from them. Those who remain are confronted with the same problems, but they react differently. Although this implies that the cause lies within the student, many of the causative factors may be found in the school's program, which should be studied and modified.

Studies in causes of withdrawal. Reasons for leaving school given by youth have been investigated on both local and state levels. Results for the country must be assembled from summaries of these separate investigations, but since there is much agreement, some generalizations may be made. Reasons for leaving school, stated in general terms, have value in studying individual pupils or local school systems only in that they supply a basis for beginning. Major causes of leaving school are of value in planning school programs which will hold students longer, for major causes in one community will probably be about the same as those in another; the specific ones will vary.

Dillon⁸ studied 1,360 individuals who left school early in five large cities. Firsthand information was secured as to the causes of leaving. He found that the major reasons related to the school: the largest single cause was "Preferred work to school." This was followed by financial and personal reasons. The major reasons for preferring work to school were "Not interested in schoolwork," "Could not learn," "Discouraged," and a dislike for teachers or subjects. "Needing money to buy clothes" was the chief financial reason given.

⁸ Harold J. Dillon, "Early School Leavers," National Child Labor Committee, New York, 1949.

In this study, it was found that there was nothing unique in the family background of the school leavers that might cause them to leave. The school leavers were no more handicapped by broken homes or frequent changes of residence than were many others who remained in school. Although only 40 per cent of the school leavers were normal or above in intelligence, these students were considered to be educable in existing secondary-school programs. Many students with the same ability remain to graduate.

A state-wide study was made by teachers of West Virginia, who spent three years interviewing students who withdrew from school before graduation. They found that a high relationship existed between well-prepared teachers, the education of the parents, and the per capita income and the holding power of schools.⁴

In a study made by Henry of the schools of Arkansas, it was found that the percentage of withdrawals decreased as the number of curricular and extracurricular offerings increased.⁵ Factors associated with withdrawal were similar to those found in other studies. In order of importance the chief ones were marriage, lack of interest, entering the armed forces, lack of ability, overageness, and work.

These and other studies have found many factors associated with withdrawal, but for purposes of discussion they may be divided into the following categories: (1) intelligence, (2) failure and retardation, (3) sex, (4) socioeconomic status of the family, (5) economic reasons, (6) health, (7) accessibility, (8) age, (9) compulsory attendance laws, (10) inarticulation, and (11) home conditions.

1. *Intelligence.* Intelligence as a primary cause of elimination has been overrated. It is true that many pupils find the courses of studies beyond their mental capacities and eliminate themselves or are eliminated by constant failures. However, it would be safe to say that only a small percentage of adolescents are so deficient in mental ability that they cannot profit by some kind of high-school work. Although pupils with low I.Q.'s do finish high school, their chances of finishing

⁴ Where's the Other 65 Per Cent? *Leaders' Information Report*, October, 1947, West Virginia Education Association, Charleston, W. Va., p. 1.

⁵ Jesse D. Henry, "A Study of Some Factors Associated with the Withdrawal of Students from the Secondary Schools of Arkansas," doctor's dissertation, University of Arkansas, Fayetteville, 1953.

are somewhat reduced because of competition with those of average and above-average ability. To say that those pupils with low ability cannot profit by high-school work postulates an academic literary curriculum. This is not necessarily true, for a curriculum can be constructed which is adapted to the needs and abilities of those of lower ability. In small schools with a single curriculum which all pupils must pursue, withdrawals are numerous.

If the school is large enough to offer a large variety of subjects, even if the pupil cannot profit by one pattern of courses, he can, by exploration and guidance, discover those in keeping with his ability. Usually in the small school, the curriculum is single, classical, or college-preparatory, with few electives and little or no chance to explore or find work suited to capacities.

Most studies agree that those of low intelligence are eliminated in greater proportions than those of high intelligence. Those of lower intelligence must apply themselves more diligently to schoolwork in order to pass, are less likely to be interested in classical and formal subjects, fail in larger numbers, become retarded and discouraged, and drop out. Revising the curriculum to fit the varying abilities of all pupils has reduced the elimination among those of less ability. Educators are slowly getting away from the idea that the pupil should fit the curriculum, and they are subscribing to the idea that the curriculum should fit the pupil. Like Procrustes, pupils are often either stretched or reduced in order to meet the standards of the curriculum bed—either treatment being detrimental to their best interests.

2. Failure and Retardation. Failure is closely associated with low intelligence, which is a cause of retardation and may be a direct or indirect cause of elimination. Other causes of failure which are related to low ability are a lack of interest, inability to see the need of the subjects being pursued, poor study habits or technique, low reading ability, and a lack of application. Those of low ability are more likely to possess these defects than those of higher mentality. Other causes of failure are illness, poor health, physical handicaps, as poor vision, moving from school to school, or poor articulation in the school system. Inarticulation may be defined as any condition in a school system where a pupil's regular progress is inhibited because of faulty curriculum, abrupt changes in subject matter, methods of discipline, tech-

niques of teaching, faulty administration, or an unsympathetic attitude on the part of the teachers. A pupil may fail because of poor educational guidance or a lack of guidance in selecting courses.

Failure is one of the chief causes of retardation, but not the only cause. Other causes are prolonged absences, losses due to changing schools or changing curricula, entering school at a late age, or failure to carry a normal load in terms of subjects. If the average pupil load is adapted to the average student capacity, average progress should not assume that half should be retarded and half accelerated because half are above and half below the average in mental ability. In group instruction, minimum standards are usually low enough so that by a reasonable amount of effort the less capable pupils can make passing marks, while the better pupils are given extra work or use their superior ability to make passing marks with a minimum effort. These conditions, and the fact that there is not perfect correspondence between marks and ability, and a negative relationship between marks and effort, render such an assumption invalid. Either acceleration or retardation is evidence of maladjustment to the school curriculum.

3. *Sex.* In the elementary school, there is little difference in the number of boys compared with the number of girls, but in the secondary school for some years the number of girls enrolled has exceeded the number of boys. This may be explained on the grounds that the economic world has a greater attraction for boys, while the school curriculum has a greater attraction for girls or they are willing to pursue an uninteresting curriculum more readily than boys.

In recent years, as schools have reorganized and curricula have been enriched, the number of boys remaining to graduate has increased. The addition of such features as activities, departmentalization, grouping, and athletics and the introduction of new courses and the modification of old ones, have made a stronger appeal to boys than did the former program of offerings.

4. *Socioeconomic Status of Family.* In the past, the high school was populated mostly by those in more comfortable circumstances, and to some extent this is true today. However, this is getting to be a less important factor in the holding power of the secondary school. Much progress has been made toward greater socioeconomic democratization.

An investigation of about 30,000 youth in Pennsylvania who consti-

tuted a representative sampling of young people who left school to seek employment showed that the better the economic background from which the boys and girls came, the longer they remained in school.⁶

The economic factor varies considerably in different sections of the United States. In areas where secondary schools are not easily accessible, it is difficult for many to pay a nonresident tuition fee and also pay for transportation or board. In still others, the factors of clothing and allowance for school and social activities play an important part in whether a pupil finds school attractive or not. This is especially true of rural youth attending a city high school. Many find it difficult to purchase textbooks and other necessary school supplies. Whether a pupil is encouraged by his parents to attend school or not is a factor, for those of a lower socioeconomic status received less schooling themselves and do not encourage their children to remain to graduate from high school.

Younger members of large families have a better opportunity to attend high school than older ones in families of lower economic status. This is directly due to an increased number of gainfully employed persons per family, which will keep some away from school because of employment and permit a younger brother or sister to attend school.⁷ Mortality of the parents, especially the father, is a factor which excludes many from school since they may find it necessary to seek employment.

PERSONAL EXPENSES OF HIGH-SCHOOL PUPILS. Further evidence that secondary education is selective in favor of those of higher socioeconomic status is shown by the amount of personal expenses incident to attending school. In order to determine the amount of personal expenses, accounts were kept by a large number of pupils in 134 high schools over a period of 36 weeks.⁸ The chief items of expense and the average amounts for grades 9 and 12 were as follows:

⁶ American Youth Commission, "Report on Secondary Education," p. 5, American Council on Education, Washington, D.C., 1937.

⁷ Harold H. Punk, Home and Family Background of High-school Pupils, *School Review*, 44 (October, 1936), pp. 597-607.

⁸ Paul B. Jacobson, Personal Expenses of High-school Students, *School Review*, 52 (June, 1944), pp. 350-355; and Grace S. Wright, High-school Attendance and Family Income, *School Life*, 29 (June, 1947), pp. 7-10.

Item	Grade 9	Grade 12
Clothing.....	\$33.56	\$41.46
Lunches.....	14.61	16.18
Miscellaneous: ice cream, drinks.....	5.87	9.98
School activities.....	6.59	7.91
Transportation.....	5.86	7.72
School supplies.....	4.25	4.30
Uniforms and equipment.....	3.38	2.05
Total.....	\$74.12	\$89.60

The amount spent by girls for clothing averaged \$15 more than the amount spent by boys, for clothing was needed "to maintain self-respect." The amount spent by those whose parents were engaged in professional pursuits averaged \$96.53; those in domestic vocations, \$76.98.

A study was conducted by Walker⁹ to determine the hidden tuition costs in the schools of Arkansas. She found that the average cost per year for incidental fees, exclusive of food and clothing, was about \$125 per pupil. Many items did not have to be purchased, as admissions to athletic contests, but there was a "social" compulsion which was, in many cases, very strong.

5. Economic Reasons. Although many of those who reported they left school for economic reasons could have remained had they so desired, there are many who are unable to attend because of the destitute condition of the family or because the family is dependent on the earnings of members who are of secondary-school age.

There has been a marked decline since 1910 in the proportionate number of boys and girls gainfully employed between the ages of 10 to 15, due mostly to improved child-labor laws. In 1890, the percentage of gainfully employed was 26 per cent for boys; in 1930, it was little over 6 per cent. For girls, the percentage dropped from 10 to 3 per cent during the same period. Most of the decrease took place since 1910, at which time the proportionate number employed was about

⁹ Wanda Walker, "A Study of Pupil Participation Costs in the Public Secondary Schools of Arkansas," doctor's dissertation, University of Arkansas, Fayetteville, 1953.

the same as in 1890.¹⁰ The great majority were employed in agricultural work; the others were engaged in trades, domestic and personal service, manufacturing, and clerical work. Conditions have improved considerably since 1910 in the proportion of children between the ages of 10 to 15 doing agricultural work.

Many pupils in the cotton-growing states are kept out of school during the late summer and early fall in order to pick cotton during those months and enter school in January. In other areas, attendance is lower during certain seasons when children help plant or harvest crops.

6. Health. Although exact data are not available concerning the extent of withdrawals from school because of ill-health, it would be safe to conclude that it is considerable. It is a common occurrence for pupils to be absent from school for several months and drop out of school for the entire semester or year because they are unable to make up the work missed. Such cases often lead to discouragement and permanent withdrawals.

7. Accessibility. As stated in Chap. 1, in densely populated areas secondary schools were made accessible to all who wished to attend, while in mountainous and sparsely settled areas establishing schools at a convenient distance to all was difficult, if not impossible. Consolidations which were made possible with improved means of transportation have brought secondary education to thousands, and accessibility is no longer a large factor in attendance.

8. Age. In a given grade, there is a negative correlation between age and intelligence, which means that the younger pupils have higher intelligence quotients. The younger pupils, then, are less subject to failure and retardation, find the courses more interesting, and are more likely to select for a lifework one of the professions which requires more schooling. The older pupils have been retarded, have failed of promotion, find the curriculum less interesting and more difficult, and often drop out when they attain the age beyond the compulsory school limits. Since there is also a (slight) positive relationship between socio-economic status and intelligence, the older pupils are more likely to come from homes of a lower economic level and are thus subject to withdrawal in order to help support the family, or for other causes in which a lack of funds plays a part.

¹⁰ Population Trends and Their Educational Implications, *Research Bulletin of the National Education Association*, 16 (January, 1938), p. 20.

9. Compulsory Attendance Laws. The usual age of entrance into the secondary school is 14, and although the majority of states require school attendance beyond this age, work permits may be secured in most states if pupils have attained the age of 14 and have completed certain grades. Forty-five states require school attendance to the age of 16 or more unless work permits are secured, but only 9 states require the completion of the twelfth grade or the attainment of the ages of 17 or 18 unless work permits are granted. The minimum schooling required before work permits may be secured varies, but the usual requirement is the completion of the eighth grade.¹¹

From these facts it is evident that, if attendance laws are enforced, if pupils cannot secure employment, and if they are not retarded, compulsory education laws will retain the majority of pupils in high school to the tenth or eleventh grade. Attendance laws are not enforced rigidly beyond the elementary school. As a result, they are instrumental in holding pupils to the high school but not through it.

10. Inarticulation. Inarticulation refers to any condition in the school system, whether due to faulty methods of instruction, abrupt changes in discipline or the curriculum, or faulty administration, which will retard the normal progress of a pupil or cause failure, discouragement, loss of interest, or elimination. Any elimination due to inarticulation is caused by internal factors or is a fault of the school, rather than external factors, as economic conditions, health, or lack of ability. The abrupt change in the curriculum from the eighth grade to the ninth has caused much elimination due to the pupil's lack of ability to adjust himself. Teachers have often been unsympathetic in their methods of discipline, causing pupils to become antagonistic. Many have been expelled or suspended for minor offenses, and their schooling has been terminated.

Dillon¹² found that most elimination occurred at about the tenth grade, which is beyond the gap between the elementary and secondary divisions. Henry¹³ found better holding power in reorganized schools, but since they also offered more subjects, this, rather than reorganization, may have been the factor responsible for keeping students in school for a longer time.

¹¹ Maris M. Proffitt, *School Census, Compulsory Education and Child Labor, U.S. Office of Education Bulletin 1, 1945.*

¹² Dillon, *op. cit.*

¹³ Henry, *op. cit.*

11. Home Conditions. In the West Virginia¹⁴ study it was also found that there is a correspondence between the amount of education received by the parents and the amount received by their children. Both heredity and environment would account for this relationship. Parents are much alike in the amount of schooling they receive, and through heredity a child will receive a capacity; through the home environment, encouragement and stimulation, if not actual compulsion.

METHODS OF REDUCING RETARDATION AND ELIMINATION

In order to reduce the factors causing elimination and retardation, the following principles might be effective:

1. The school curriculum should be adapted to the intellectual capacities, interests, and needs of the pupils. It appears that we cannot make the pupil fit the curriculum. A more functional course of studies built upon the immediate needs and interests of modern youth will increase the holding power by creating more interest.
2. Increased guidance service which might help to direct pupils into courses more suited to their abilities should be provided.
3. The introduction of more vocational training would hold some students.
4. Improved child-labor laws would no doubt keep some children in school.
5. Increased health service should be provided in the schools.
6. Making secondary education accessible to all by means of consolidation and transportation would undoubtedly hold some pupils.
7. Tuition of nonresident pupils should be paid by the district in which they live or by the state.
8. Reduction in the number of failures would reduce retardation and elimination. There is a recent tendency to permit all pupils to pursue a grade a year and not maintain definite subject-matter standards as a basis for promotion.
9. Compulsory attendance laws should be extended to include secondary education, and these should be rigidly enforced.
10. Better articulation between the divisions of our school system and between grades should be provided.
11. Closer home and school relationships will gain greater cooperation on the part of parents in keeping pupils in school.

¹⁴ Where's the Other 65 Per Cent? *Leaders' Information Report*, October, 1947, West Virginia Education Association, Charleston, W. Va., p. 1.

12. Schools can and should reduce the cost of personal expenses. They can absorb the cost of various activities, decrease emphasis upon expensive uniforms and class jewelry, and require less material and supplies in many cases.

13. The school should provide more opportunities and help students find more opportunities to earn money by part-time work.

14. In most cases, the only honors given by the school are limited and of an academic nature, which does not act as an incentive for the majority. The school could provide for more honors of various types so that each pupil would have a chance to earn one.

15. Pupils who are required to be absent from school for long periods because of illness or accidents, but who are able to study at home or in a hospital, should be kept in continued contact with the school and aided in keeping up with their courses. If this plan is followed, such pupils will be able to rejoin their classes without loss due to absence. Many schools are employing "home teachers" who devote their full time to this work.

16. Watch for symptoms of withdrawal, and make an effort to retain those who show the symptoms. Various symptoms have been found by several investigators which help indicate potential withdrawees. Students are potential withdrawees who show regression in attendance and in scholarship; who are overage for their grade and who repeated grades in elementary school, which probably caused the overageness; who failed one or more subjects in high school and had to repeat; and who take little interest in the school and engage in few extracurricular activities.

Locating those who are likely to leave before graduation is only the first step in retaining them. Such pupils should be studied, encouraged in their work, and urged to participate in more activities. Keeping in close touch with their parents may aid in retaining them longer. Sometimes those on the verge of leaving are scolded or punished more severely than they think they deserve; therefore, for them especially, diplomacy and tact should be exercised.

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8

THE CURRICULUM

The heart of the entire secondary school is the curriculum, which is defined as all the activities engaged in by pupils which are provided, supervised, or directed by the school. Providing facilities, making them accessible, getting pupils into the high school and holding them there would be futile if the activities provided were not meeting their needs or accomplishing the purposes of secondary education.

There is considerable disagreement as to what experiences should be provided in the high school. There are those who believe that it does not matter what is taught, for one subject is as good as another. There are those who believe in the theory of formal discipline and are partial to such subjects as mathematics, formal grammar, and Latin. There are those who would, like the founders of the academy, include everything that is useful and ornamental, and finally there are those who believe that subjects such as languages and literature should be stressed mostly, as opposed to vocational subjects.

The present chapter is concerned with a general description of secondary schools, the organization and grade placement of subjects, divisions and types of curricula, and how the curriculum is administered.

Definition of terms. The most common and frequently used terms employed in discussing the curriculum with the definitions used in this discussion are:

Curriculum. In a limited sense the school curriculum is a systematic arrangement of courses designed to meet the needs of a pupil or a group of pupils. In its broadest sense it includes the complete school environment, involving all the courses, activities, readings, and associations furnished to the pupils in the school. The various types of cur-

ricula are designated as the commercial, college-preparatory, general, business, home-arts, and industrial. An individual curriculum for a pupil would include all the activities a pupil has had under the guidance and direction of the school.

Course of Study. A course of study is an arrangement of detailed materials and activities selected from some broad field or fields of subject matter and arranged into topics, units, or lessons for instructional purposes. To differentiate between a course of study and subject, mathematics is a subject, but algebra I is a course of study; science is a subject, but chemistry is a course of study.

Constants and Variables. Constants are courses of study required of all pupils or required of all pupils pursuing a particular curriculum. The constants, when grouped together, are called the general curriculum, or common learnings. Variables, or electives, are those courses of study which may be elected at the option of a pupil; they are also known as special-interest courses of study.

Program of Studies. The program of studies is a list, by years, of all the courses of study and activities offered by the school.

The Unit of Credit. The unit has been universally accepted as the standard for measuring the amount of credit earned in secondary schools of the United States. It is usually considered as comprising the credit earned for pursuing one course meeting five times a week for an entire year. Technically it requires a class attendance of 120 sixty-minute hours, or the equivalent. If the school year is 180 days, the class period cannot be less than 40 minutes to meet this requirement.

Types of Curricula. A high school which offers a large variety of subjects and makes no separation between vocational and cultural subjects is called a "comprehensive" high school as distinguished from the "commercial," "technical," "vocational," or "classical" high school. The comprehensive type is far more common in the United States than any other. Comprehensive high schools are classified according to the number of curricula they offer.

The great majority of high schools offer a number of courses which all pupils must take. Often this number includes as high as 10 or 12 of the 16 units required for graduation, and in many small schools pupils are required to take all the courses offered in order to earn the required units for graduation. Such a school has a single curriculum.

Schools with sufficient enrollment to justify an enriched program may have many curricula which pupils may elect, as the classical, college-preparatory, general, technical, commercial, vocational, and trade-preparatory. In each of these curricula, there are a number of required courses and four to six electives. The type of subjects elected determines the name given the curriculum, for the general curriculum is common to all. Thus, these types of curricula are not distinct and separate. The names simply describe the pattern of special-interest courses pursued.

Core Curriculum. The core curriculum has been defined in many ways. It has been used to designate all the subjects that are required of all pupils, or the constants, or common learnings. It has also been used to mean the heart of a unit of instruction. In the third sense, or meaning, it refers to those subjects which are required of all pupils and which are integrated into units of instruction. This latter meaning is the one that will be used in this treatment.

Instructional Units. Instructional units should not be confused with units of credit. Instructional units are related portions of subject matter which are organized about a central theme for the purpose of instruction. They usually transcend subject-matter lines. They may be of the subject, topic, or experience-unit type. These will be discussed further in a later chapter.

Activities and Learning Experiences. In subsequent discussions of the curriculum, frequent mention will be made of learning activities. These refer to anything that a student does to cause learning to take place. They may consist of readings, discussions, problem solving, field trips, writing, compositions, essays, letters, experimenting, singing, playing, or any activity of a physical or mental nature that is a true learning experience rather than a repetitive activity.

INVALID BASES FOR SELECTING CURRICULAR MATERIALS

Curricular materials, subject matter, and activities in which pupils will engage cannot be selected without a sound basis, any more than a doctor can prescribe treatment for a patient without a diagnosis. There is room in the curriculum for only a limited number of activities and experiences. The school has control of the pupil for only a small part of his life; so it behooves educators to make as wise a selection as

possible. The question logically follows, "On what basis should subject matter be selected?"

In the past, and in many cases in the present, many methods or bases for selecting curricular content which have doubtful value have been employed. Some of these methods are:

Formal discipline. One of the earliest and oldest bases for selecting curricular materials arises from the doctrine of formal discipline and the faculty theory as explanations of the transfer of training. These doctrines, which were described earlier, led educators to believe that if a subject were to have value it must be difficult so as to tax the intellect to its greatest capacity. Such subjects as mathematics and foreign languages were supposed to be most valuable. Followers of these doctrines believed that it mattered little what one studied so long as it was hard and distasteful and possessed little practical value. The mind trained on such subjects would be able to function in any capacity.

Moral training by doubtful methods. Christianity has been a powerful influence in establishing schools and in selecting the content of the curriculum. Because of the great emphasis the Church placed on moral training and preparation for the ministry, such subjects as Latin and Greek, the Bible, and didactic stories were placed in the curriculum. A type of physiology stressing the evils of narcotics, alcoholic beverages, tobacco, and forms of dissipation found its way into the school partly because of the influence of the Church. In the latter part of the nineteenth century, moral training through the medium of didactic stories was in vogue. Almost every selection in the readers and materials of literature courses contained a moral designed to teach a lesson. The lesson was usually stated, not merely implied.

Maintaining class distinction. The school curriculum has been employed in the past to maintain class distinctions by selecting materials on the basis of their cultural rather than their utilitarian or social values. To an extent, many subjects offered in the academies were selected on this basis, especially in girls' schools. The curricula abounded in such subjects as music, art, manners, dancing, foreign languages, and sewing, especially embroidery, crocheting, and knitting, not for practical purposes but because that was done in "polite" society for charity or for soldiers. A smattering of many things was

taught, such as singing certain songs in a foreign language, reading a French menu, horseback riding, painting on silk, elocution, etiquette, excerpts from the works of scholars in order that quotations from them would lead one to believe the entire work had been studied. Usually enough Latin was taught so that the pupils could intersperse their English sentences with Latin phrases which would impress the listener and shroud the meaning.

Tradition. Gradually, subjects which were placed in the high-school curriculum for invalid reasons have either disappeared or been modified, or other values have been found or claimed for them. Tradition still plays a great part in keeping many in the curriculum. It is not uncommon to hear such statements as "A doctrine as old as formal discipline *must* have some truth in it," and "A subject which has been in the curriculum as long as a thousand years *must* have some good in it." An excellent satire on the reluctance of a people to reorganize the school curriculum and remove subjects once practical but no longer so because of a changed social order was presented by Peddiwell in "The Saber-Tooth Curriculum."¹ This relates, satirically, how the educators in the Paleolithic era invented such new values as formal discipline, mental training, and cultural values for the three chief subjects in their school curricula, which were once practical but which, because of the glacial period, were no longer so. Nevertheless, they were kept in the curriculum for hundreds of years.

One should not conclude that just because a subject or doctrine is old it has no value. This does not follow. Curriculum construction is a constant and never-ending task. Each generation must examine the social order in which it lives and make the school fit its needs. Each must establish its own goals, formulate its own objectives, and select activities to meet these. If elements of the past have virtue for the present, as many do, they should be retained. There is no virtue in newness as such, nor can the old be condemned merely because it is old.

Meeting college-entrance requirements. Since the traditional purpose of secondary education has been to prepare students for college, the high school has had a difficult task to live down that limited con-

¹ J. Abner Peddiwell, "The Saber-Tooth Curriculum," McGraw-Hill Book Company, Inc., New York, 1939.

ception. Perhaps college-entrance requirements have had the greatest single influence on the high-school curriculum of all the factors influencing it. It is only in the last few decades that studies have shown that the colleges need not be so specific in their prescriptions in order to assure that entering students will be prepared to pursue college courses.²

Pressure groups. Pressure groups may be defined as small minorities which bring pressure to bear upon the school to have certain subjects, topics, or points of view introduced in the curriculum. The proposals are usually made by representatives of organizations who seek a hearing before school officials engaged in curriculum construction. Such proposals may or may not be aims of society as a whole or may or may not be capable of being taught in schools. No curricular activities should be introduced because of pressure, but all should be selected on the valid bases proposed.

Adult interests and activities. In many cases, courses of study have been built around adult interests without regard to whether or not they would be of interest to adolescents. The adults may be teachers, parents, or those engaged in curriculum planning on a state-wide scale. Often adults think that since they enjoyed an activity, were interested in some particular course of study, or enjoyed reading some book or viewing some motion picture, then youth would also profit by these experiences and activities.

Popular fallacies concerning the nature and characteristics of adolescents. There are many popular fallacies about adolescents which have developed through the poor memories of adults, the exaggerations of adolescents, and as a result of erroneous information found in popular literature which was never intended to display the true characteristics of the adolescent. A more complete discussion of these fallacies and the characteristics of the adolescent will be presented in the next chapter.

Logical rather than a psychological approach in selecting and organizing subject matter. The various subjects, as mathematics, science, and the social studies, have been organized logically for college students and for those engaged in advanced studies of subjects. The logical organization is necessary to produce order and to systematize

²See Chap. 6.

knowledge, but it is not necessarily the most effective method of presenting material to secondary students. The principle formulated by Dewey, that pupils learn by doing and thinking and that they should be placed in natural situations which involve problems and should then be aided to formulate their own solutions, does not call for a logical organization of activities or of learning materials. Subject lines should be ignored in many cases; one should start with the familiar and go to the unknown; start with the easy and go to the difficult. Grade placement should take into consideration the interests of youth, their needs at that time, and the maturity of the pupils as developed through growth and experience. A logical organization may ignore all these.

Too frequently the distinction is not made between the method of selecting and the method of organizing subject matter. To facilitate selecting materials to avoid overlaps and omissions, a logical method can be employed, but a psychological or pedagogical method should be employed in the presentation to pupils.

VALID BASES FOR SELECTING CURRICULAR CONTENT

There are many valid approaches to the selection of curricular materials. They are not all mutually exclusive, and one cannot be employed as a single basis without involving others. All should be considered; otherwise the curriculum will not be balanced or comprehensive. The bases furnish guiding principles for selecting and organizing materials. A few criteria on which curricula should be based are:

Philosophy of education. Every person involved in curriculum construction should formulate a basic philosophy of education which will answer the questions, "What is the purpose of the school?" "What are its general aims?" "What are its specific aims?" "What are its functions?" After these questions are answered, subject matter and activities can be selected which will produce the established outcomes. A philosophy of education does not alone tell one what to teach. Other bases for actually selecting material must be employed.

Social efficiency and stability. The secondary school should teach those things which will make individuals more socially efficient. These include training in social, business, and economic relationships, voca-

tional efficiency, and ethical character. The term is too vague and general, however, to be of any great value by itself as a basis for selecting materials.

Passing on the cultural heritage. The cultural heritage might be thought of as the accumulated experiences of the race or the best that the past has produced. This would involve a survey of the major fields of learning and the historical development of the country and an understanding and appreciation of art, music, and literature.

Fundamental needs. From outward appearances, the principle of fundamental needs, both present and future, appears to be the best basis for determining what to teach in secondary schools, but, like other bases, it cannot be used alone. If educators were able to determine just what the present and future needs of all individuals were, it would be a simple matter to place these in the curriculum, but these cannot be fully determined. There are some things all individuals or the majority will need at some time or another, and these should be given a first choice in making a selection.

Utility. There is a growing tendency to make subject matter as practical, useful, and functional as possible. The application of this method of selection is difficult since it is almost impossible to secure agreement on a definition of usefulness. Also involved is the implicit assumption that what is being used or being done is desirable. The comprehensive high school in the United States does not separate cultural from practical or vocational subjects but follows the idea that if the harmonious development of personality is to be achieved no phase of one's life can be neglected.

Individual and social efficiency. Whether one selects materials designed primarily for the individual or for society, the majority of the subject matter will be the same, but if society is considered paramount, additional topics will be considered which, perhaps, would not have been taught if individual development were considered primary. Most of the curricular material required because of legislative action is selected because of its value to society rather than the individual. For example, rugged individualism caused the exploitation and waste of natural resources which had to be checked by legislative regulations, and in several states laws have been passed making the teaching of conservation of natural resources mandatory. Many of the curricular

activities selected in this manner for the welfare of society are equally valuable for the individual.

Pupil interests. Several recent attempts to reorganize the curriculum have been based upon pupil interests as the criteria for selecting activities. Modern philosophy of education postulates that, other things being equal, those activities in which pupils are the most interested are to be preferred. There are, of course, some things in which all youth are interested, but owing to individual differences very few are equally interested in any common courses of study; and, conversely, there are few things in which some pupils are not interested. High-school youth can be interested in most of the curricular material selected on other bases, and if the school fulfills its function of exploration, many new interests will be created. It would be not only unwise but also impossible to include in the curriculum everything in which youth are interested. Furthermore, youth are not always likely to be interested in those things considered desirable for them.

This does not mean that curricular activities are to be selected wholly by adults and forced upon youth. Some, of course, will have to be selected in this manner; but, in a final analysis, individual teachers engaged in guiding the learning activities of a group of pupils select the majority of the subject matter and do so with the cooperation of the pupils. Years ago Count Leo Tolstoy remarked, "Pupils' questions are far more important than chemical equations and mathematical formulas." If teachers will give pupils an opportunity to reveal their problems and interests by asking questions and will follow "leads" given by pupils, pupil interests can be considered and pupils will have a part in building their own curricula.

Vocational efficiency. Subjects selected for the high-school curriculum to produce greater vocational efficiency should be selected on the following principles: (1) they should have both social and prevocational value; (2) they should be selected on the basis of a survey of vocational opportunities in the local community; (3) they should be congruous with the pupils' aptitudes and interests.

Regardless of what vocational courses are offered in secondary schools, many pupils who pursue them will never enter that vocation because of a lack of opportunity, a changed environment, or the discovery of a more interesting field of work. For this reason, voca-

tional courses should be so selected that the specific content will have personal and social values as well as vocational, so that the activities will be valuable even though they do not become a part of one's vocational experiences. The usual vocational courses, home economics, agriculture, general shop, and business education, are in keeping with this principle.

Vocational subjects should be representative of the vocational opportunities of the local community. Even though the courses have social value, it would be unwise to train youth in a curriculum such as business education when there are no opportunities to secure work as typists, stenographers, or secretaries.

As a general rule, the level of student abilities in different comprehensive high schools is about equal; but since there may be marked differences in some cases, the aptitudes and interests of the local student body should be determined before selecting vocational subjects.

Major activities of life. An examination of the activities of life has been employed for years as a basis for determining the aims of education. On various occasions, each individual is a consumer, a producer, a home member; at all times, he is a citizen. He will communicate, move from place to place, engage in social and recreational activities.

Another way of viewing the activities of man is to classify them into the "lives" one lives. These may be divided into eight lives: home, social and fellowship, political, mental, aesthetic, spiritual, recreational, and vocational. These are not mutually exclusive since one may be engaged in two or more at the same time. If activities are selected on the basis of aiding pupils to live these "eight lives" better, they will cover the major activities of life.

Regardless of how little thought is given to it, every secondary school in the United States has some kind of curriculum. The curricula meet the needs of the youth who attend them in varying degrees, ranging from those which are excellent to those long since outmoded. They were developed by a variety of methods and by many individuals or groups. Some were inherited without change; some were borrowed from other schools; some were constructed by directors of curricula or by administrators; and still others were planned by teachers working together in committees.

Regardless of where the curriculum of any high school came from

or who planned it, constant revision is necessary. This process is continuous, and each school must do its own planning for the youth who will attend. The process of curriculum development has been called curriculum "building," "organizing," "reorganizing," and "planning." The latter seems to be the best term, for it is descriptive of what is really done.

CURRICULUM PLANNING

Who should plan the curriculum? The time is past when a few curriculum experts, by the "scissors-and-paste" or "their-own-opinion" methods, constructed curricula and imposed them upon teachers by virtue of administrative authority. The process of curriculum construction requires the united and cooperative efforts of all persons interested in and engaged in the education of youth, and unless teachers take an active part in curriculum construction, they are not likely to be in sympathy with, or have an understanding of, curricula constructed and proposed by others. The work is and should be headed by such educational leaders as superintendents, members of state departments of education, members of the staff of colleges of education, and curriculum specialists. Under the direction of these leaders, groups may be organized to study the aims and functions of education; to list the interests, measure the abilities, and determine the needs of youth; to make definite statements of the specific outcomes to be achieved; and to select appropriate activities for their achievement. Parents as individuals, or in organized groups, should take an active part in the work. As subgroups prepare various phases of the curricula, they should be reported before interested or participating groups who should criticize the work and revisions should be made on the basis of these criticisms. This process should continue indefinitely, for curriculum construction is a continuous task.

Curriculum laboratories are being developed in many places. These are often located at teacher-training centers, where teachers in service come to continue their education. Often, outstanding teachers are encouraged by scholarships to take part in this work during summer school. The materials produced in these laboratories are usually made available to teachers of the state through bulletins published by the schools or state departments of education.

When and how often should the curriculum be revised? Work toward the revision of the curriculum is a constant process. Someone has defined a school curriculum as the "residue after teachers stopped thinking." This means that if schools are to be progressive the curriculum will never be completed. As long as the school population is changing and shifting, and as long as we have changes in economic, social, and political institutions, the school curriculum must be changed. Moreover, new developments in psychological theory continually suggest changes in method, organization, and content.

Many teachers modify their courses of study because of the stimulating effect of merely working on them. Within limits, this can be done. The same aims may be achieved in different ways. Different subject matter may be employed to produce the same outcomes; different methods and materials may be employed to secure the same results. In ideational subjects, more freedom in the selection of activities can be permitted than in skill subjects, for the latter are more definite and have fewer variations.

Major steps in curriculum planning. Curriculum planning has developed into a rather clear-cut pattern of activities following several steps. Those suggested are typical of the usual ones followed.

1. *Determine and write the school's philosophy.* This will contain statements of the teachers' and parents' ideas as to the purposes of education, what the secondary school aims to attain, who should attend school, what the purposes of the various subjects are, and what standards of attainment should be expected before a pupil should receive credit for a course. Agreement should be reached on these questions before further work is done. If not, many disagreements will follow, and little progress will be made.

2. *Review the aims of secondary education in general, and determine the specific ones of the local school.* These aims are stated in many sources, as those statements of the aims of secondary education presented in a previous chapter. They should be kept in mind throughout all phases of curriculum planning, and no activities should be included which are not in keeping with these aims.

3. *Determine the interests and characteristics of adolescents.* Since these are general and apply to all adolescents to a great extent, it will not be necessary to make a special study of them other than to determine the special interests of the youth in the particular school. The

following chapter presents the major characteristics of adolescents, their general interests, and common needs.

4. *Determine the needs of the adolescents in the local community.* Many of these will be those which are common to all youth; others must be determined by a survey of the local community.

5. *Formulate the outcomes to be achieved.* The outcomes should be specific objectives stated as subdivisions under the major objectives of education. For example, the general objective of health should be broken down into what specific factors of health are desired and what the outcomes should be. These outcomes should include those of factual information about health or what every youth should know in order to maintain sound bodies; the skills and habits that are essential; and the attitudes and appreciations that are necessary for motivating pupils to adopt correct habits.

6. *Determine which outcomes are being met by informal educational agencies and the degree to which they are being attained.* This will require a survey of the local community.

7. *Select materials and activities to achieve the outcomes.* The outcomes can be achieved only through the subject matter of the activities. There is so much subject matter that could be included, and there are so many specific bits of material which could be selected to achieve the same outcomes, that much freedom may be permitted in doing this. However, when the activities are selected, other principles must also be kept in mind and, as a result, the selection will tend to be limited.

Wesley³ lists 15 techniques which may be employed in selecting curricular materials which serve as plans, criteria, or standards for selection. Of these 15, it is probable that many, rather than a single one, will be employed.

1. Reports of national committees.
2. Courses of study.
3. Textbooks.
4. Trial and error.
5. Teachers' opinions.
6. Opinions of selected groups.
7. Frequency of mention or space allotment.

³ Edgar Bruce Wesley, "Teaching Social Studies in High Schools," 3d ed., p. 141, D. C. Heath and Company, Boston, 1950.

8. Analysis of social activities.
9. Social processes.
10. Natural activities and preferences of youth.
11. Social, civic, and economic deficiencies.
12. Current problems or issues.
13. Generalizations.
14. Qualities of good citizens.
15. Word lists.

The use of many of these techniques will require a professional library in each school containing texts in education, especially those on the curriculum and curriculum planning, current educational journals, state and local courses of study, and secondary-school texts in all secondary-school subjects. Courses of study are of great value provided they are employed wisely. They should not be used directly as a course of study for a local school, for they are either very general in nature or were constructed for some local school. They should act as guides in preparing courses of study and are valuable in formulating a philosophy of education, stating educational objectives, and suggesting learning activities. They aid in grade placement, suggest materials of instruction, and contain excellent help in determining appropriate methods of instruction.

THE ORGANIZATION OF CURRICULAR ACTIVITIES

After a complete list of activities has been selected, it is necessary that they be organized before they can be presented. There are many ways of organizing other than by the conventional method, and many of the newer methods are more in keeping with modern psychological principles of learning than is the conventional method.

The conventional method of organizing and presenting subject matter. The most common method of organizing subject matter is on the subject basis, that is, an organization according to the major logical divisions such as mathematics, science, social studies, art, and languages. This method is excellent for the purpose of organizing materials and has great significance for mature students; but it is doubtful that it has such great significance for high-school pupils. Therefore, the general principle should be followed: Organize logically, but present psychologically.

The strongest argument against the logical organization of subject matter is that all materials become isolated units seemingly unrelated to each other. Learning is organizing, and the average and below-average pupils do not have the ability to organize without help. Associations and relationships are learned better and more quickly if two related events, or cause-and-effect relationships, are presented simultaneously or in close succession. When subject matter is logically arranged and presented, pupils are likely to leave school with an accumulation or collection of isolated facts and skills but with no ability to organize them. This is comparable to teaching the parts of a clock but never teaching how they are to be assembled so that the clock may function. It must be admitted that much of this criticism should be directed at the teacher rather than the material.

The unit method of organizing subject matter. The logical organization of subject matter retards transfer of training, which proceeds more rapidly if related phases of a topic or unit are presented together. Materials taught in school are intended to be useful and to function out of school. If they do not, the school has not been wholly successful. Transcending the vertical, watertight subject-matter compartments in organizing materials for presentation is called the "horizontal" method, or "unit" method.

The unit method involves not only the organization of materials but also the method of presenting them to the pupils and evaluating the degree to which the outcomes were achieved. Although any accepted techniques of teaching may be employed, many progressive teachers follow some form of laboratory technique. The first phase involves an overview, or orientation, of the entire unit; the second, a presentation of the unit; the third, an organization, or summary, recitation; and the last, a culminating activity designed to unite all the phases into a unified whole.

Units should be organized around some nucleus which becomes the point of view, central theme, or center of interest. After the central theme is determined, activities are selected which advance or make a contribution to it, regardless of the conventional division of subject matter to which it belongs. Other things being equal, those units in which the pupils are most interested, which are more likely to function in their lives, and which include the greatest number of subject-matter fields are to be preferred. Such units as conservation of natural

resources, getting a pure food supply, and photography are examples. In a unit on photography, the subjects of physics, chemistry, mathematics, and art are all involved in order that one may have a complete understanding of the proper operation of a camera.

Before teaching a unit, the teacher should state the ultimate objectives and the specific objectives or outcomes to be achieved in terms of factual knowledge, habits and skills, attitudes and appreciations. Activities are then selected for achieving them, and a method of evaluation is determined.

Unit organization is often employed for the entire curriculum in the seventh grade, being replaced gradually by the conventional method of organization as one proceeds to the senior year. Another plan is to organize the general curriculum content by units and the special interests by subjects.

The consideration of immediate needs. Subjects should be organized so that they meet the immediate needs of pupils, rather than having delayed, or deferred, values. To do this, the selection and presentation of materials should be such that every youth who attends the secondary school can not only profit by the experience but can also earn passing marks and be promoted. This means that the curriculum should be child-centered, that is, selected to fit the pupil, rather than attempting to make the pupil fit a predetermined course.

Each course should be complete in itself. Because of the great amount of elimination from high school, every course should be complete in itself; that is, none should be so organized that two years are required before value is accrued. If courses are sequentially related, each course will bring experiences basic to subsequent ones. For example, there is no good reason for not arranging first-year courses in languages so that pupils will profit by them though a second year is not taken. Many never take a second course, because they either leave school or reveal no interest in or aptitude for foreign languages.

Grade placement. Several principles and factors must be considered in the grade placement of units of subject matter. These involve continuity and sequence of the subject, maturity of the pupils, probability of elimination from school, and a consideration of whether the pupil will enter an institution of higher learning or enter industry immediately following graduation.

There is no sound basis for devoting some time to the study of a

unit during a certain grade and then dropping it permanently for the pursuit of another phase of subject matter. Knowledge is not acquired in this manner. In order to produce integration in learning, much time is necessary for the pupil to assimilate and organize his experiences properly. Activities which have been experienced will soon be forgotten if they are not used, and relationships between one topic and another will not be seen if they are treated as isolated and independent entities. It might be better to subdivide units and study one phase one year and another the next.

Materials which are sequentially related must be presented in such an order that skills basic to a further understanding of the subject will be presented first. Likewise, some materials furnish background for a better understanding of subsequent materials. Examples of the first are found in mathematics. A knowledge of multiplication and subtraction must precede that of long division. For the second, a study of European history furnishes a background for a better understanding of American history.

Maturity brings new experiences and physiological and psychological development. It is a well-known principle that *many things taught in the school would have been learned incidentally anyhow*. The school merely hastens the acquisition of certain skills. This statement does not suggest that *all* experiences furnished by the school would have been had later. The school should recognize the informal or incidental educational agencies by placing certain subjects later in the curriculum in order that pupils will have had sufficient experience to furnish a background for a more complete understanding. Units involving a study of comparative governments and democratic institutions are examples of these.

As contrasted with the placing of materials late in the curriculum, certain material should be taught as early as possible in order to meet the needs of those who will not continue until graduation. This does not produce a conflict, because the integrating units are of greatest importance for this group, and the integrating units should also be placed early in the curriculum for all groups. In the junior high school, most of the subjects are constants, or are the same for all. As one proceeds to the twelfth grade, fewer subjects are required and more free electives permitted, for the integrating function should be stressed first and the individualizing function later.

Those who will enter institutions of higher learning after graduation and those who will enter industry should be given different considerations. Those subjects which are required for college entrance but do not have value for all pupils, like algebra, should be placed in the eleventh or twelfth grades as electives. There are two reasons for this. Those remaining for the eleventh and twelfth grades are the only ones who will attend college, and if the subjects are placed in these years, the skills are retained to a greater degree for use in college than if they were taught in an earlier year. Furthermore, the arrangement leaves the curriculum free to offer other subjects for those who will not graduate. For those who enter industry immediately after graduation, certain courses of a vocational nature should be offered in the last two years in order that graduates will receive some prevocational background before entering industry.

General education and special interests. The curriculum may be divided into two rather distinct divisions for administrative and guidance purposes: general education, which consists of the courses required of all, and the special needs and interest courses, which are elected. These two parts are not separated by any definite and sharp lines, for special interests may and should be developed along with general education, and some general education may be found in the special-interest division. The two divisions are shown diagrammatically in Fig. 12.

The special interests are again subdivided into academic and vocational subjects and are usually elected subjects, whereas general education is required of all pupils. The recommended percentage of time to be devoted to each is also shown in the diagram.

The term "general education" refers to the common needs, interests, and concerns of the group being educated, as contrasted with the special interests and needs of particular groups of pupils. The fact that any subject matter that is common to all members of a group must be general in nature suggests the name for the major part of the curriculum—general education—and because it is the heart of the entire curriculum, it is often called the core curriculum. General education provides a common body of subject matter, a stimulus for experiences which have growth value, and an area out of which special interests

⁴ Gilbert S. Willey, *A Modern Program for a Modern Day*, *Education Leadership*, 3 (May, 1946), pp. 356-359.

emerge. It is a comprehensive area of life and must be based on natural experiences of the group for which it was prepared.⁶

The common learnings, or general education, occupies about 50 per cent of the time in the junior high school and gradually decreases to 20 per cent in the senior division. As less time is devoted to general education, more subjects may be elected. About one-fourth of the

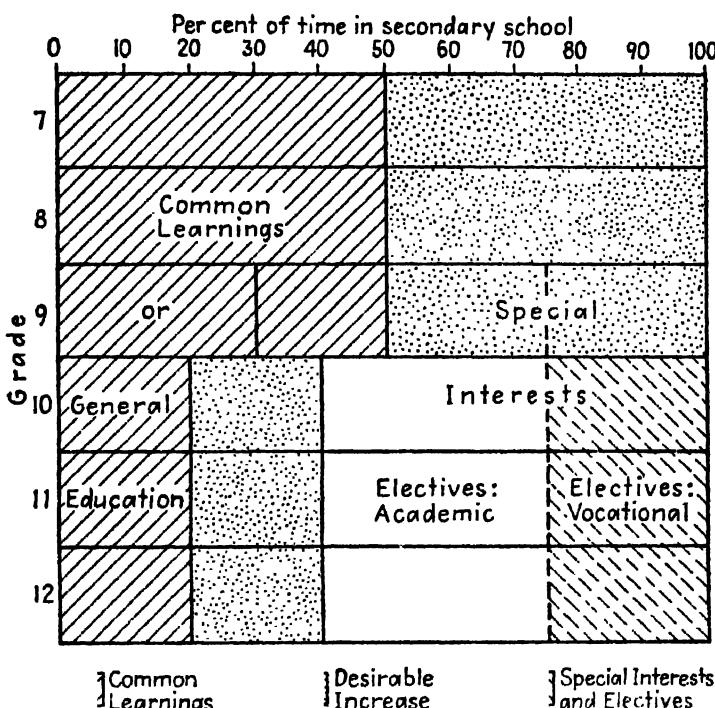


FIG. 12. Recommended percentage of time in secondary schools for common learnings, special interests, and electives. [Based on Gilbert S. Willey, *A Modern Program for a Modern Day*, *Educational Leadership*, 3 (May, 1946), pp. 356-359.]

elected subjects may be vocational in nature. These recommendations are based on the following principles:

1. In grades 7, 8, and 9, the needs of youth are more common than in later years; so more of their work should be in general education. This is the period of common schooling.
2. Beginning with the tenth grade, special interests become more prominent and should be given more consideration. In this period, the curriculum is differentiated to suit needs of individuals and special interests.

⁶ Joseph Butterweck, The Core-curriculum for Secondary Schools, *Clearing House*, 21 (December, 1944), pp. 195-200.

3. Special interests should be outgrowths of the common-learnings area and should be along occupational, intellectual, and recreational lines.

4. In grades 10 through 12 there are still some common needs; therefore, about 20 per cent of the curriculum should be devoted to them.

5. Since the percentage of time to be devoted to any area is more or less arbitrary, strict adherence to this time is not recommended; on the contrary, it should remain flexible enough to provide for local situations, special cases, and initiative and judgment of the faculty.

6. In the junior high school, differences are cared for *within* the classroom; in the senior high school, in different classes and diversified curricula as well as within the classroom.

Just as the common learnings meet the integrating function of secondary education, the elective courses meet the individualizing or differentiating function. After a common background has been established, pupils may pursue courses congruous with their interests and aptitudes. For the school to fulfill this function adequately, it must provide for a great variety of experiences.

SUGGESTED CURRICULUM IN TERMS OF SUBJECTS

There is some danger in suggesting courses of study by subject-matter names, since the names might convey the impression that the same materials found in traditional courses are referred to, rather than a group of activities selected from modern life. What a course of study is called is not so important as the content selected for the course and the manner in which it is organized and presented.

A suggested curriculum of common learnings and special interests is presented in Table 15. No attempt has been made to present an exhaustive list of electives. Those selected are offered by more high schools and pursued by more pupils than others. General education should be relatively constant for all schools regardless of size or location; the special interests or electives should be varied according to the size and location of the school and the needs and interests of the pupils. If there is adequate articulation between the elementary school and the high school for those organized on the 8-4 plan, many experiences in the seventh and eighth grades will be the same whether those grades are in the elementary or secondary division. For those schools

Table 15. Suggested Curriculum of General Education and Special Interests for Grades 7 through 12

<i>Grade</i>	<i>General education</i>	<i>Special interests</i>
7	English Social studies Science and consumer education Mathematics Physical education, health, and safety Home arts Fine arts and music Industrial arts	
8	English Social studies Science and consumer education Mathematics Physical education, health, and safety Home arts Fine arts and music Industrial arts	
9	English Social studies Science and consumer education Mathematics Physical education, health, and safety Home arts Fine arts and music Industrial arts	Foreign languages Agriculture * Business education †
10	English Social studies Science Mathematics Physical education	Foreign languages Business education ‡ Home economics or agriculture Vocational education
11	English Social studies Physical education	Mathematics Science Foreign languages Business education Home economics or agriculture Vocational education
12	English Social studies Physical education	Mathematics Science Foreign languages Business education Home economics or agriculture Vocational education

* May be substituted for science.

† May be substituted for social studies.

‡ Business arithmetic may be substituted for other types of mathematics.

organized on the 8-4 plan, the last four years may be considered for the secondary division.

General principles on which the proposed curriculum is based. The suggested curriculum is based partly on the following general principles:

1. The two subjects given the most weight are English and social studies, for under these categories are included more needed experiences than any others.
2. Besides the academic content in social studies, English, science, and mathematics needed by all pupils, each pupil should be required to engage in physical activities and in activities related to the fine arts, industrial arts, and home economics.
3. The majority of the curriculum is prescribed. The few "pure" electives, about four or five, are all offered in the tenth, eleventh, and twelfth grades. Some of the required courses may become "limited" electives, that is, pupils may be given a choice in selecting a specific course from a general field.
4. The number of hours devoted to the constants gradually decreases from the seventh to the twelfth grade, and, conversely, the number of electives increase as one proceeds to the twelfth grade.
5. All pupils will participate in the so-called extracurricular activities, but not as something extra, for they will be completely absorbed by the school curriculum and become an integrated part of school life.
6. The prescribed subjects are congruous with both theory and practice. They also represent the trends in curriculum reorganization which will be revealed in a subsequent chapter and the subjects either pursued by the majority of pupils or offered by the majority of schools.

ENRICHING THE CURRICULUM

The curriculum, as previously defined, includes all the experiences under the direction of the school. Although the regularly scheduled courses of study constitute the major portion of the experiences, they do not constitute all of them. Several methods may be employed to enrich the curriculum.

Activities. An activities program is essential to give those experiences not provided for in regular course work. The activities should supplement and be an outgrowth of the regular courses of study. Their purpose is to give an opportunity for pupils to pursue further their indi-

vidual interests and have an opportunity to participate actively in various forms of group and individual work.

The school library. The school is an environment in which pupils will be stimulated in making a conscious effort to learn. The school library is part of this environment, and since the school selects the books and provides an opportunity for pupils to read them, it becomes a part of the curriculum. A few principles are presented for making the library more functional:

1. The books, magazines, and pamphlets should be selected on the same basis as any school experiences or activities are selected.
2. They should be housed in one centrally located room.
3. Books should be stacked on open shelves in order that pupils may browse among them.
4. All pupils should have a daily opportunity of one to two hours in which to make use of the library.
5. A well-trained librarian should be employed who is able to assist pupils in locating materials.

The community. Pupils cannot react to an entirely new experience. If they have not had certain experiences necessary for an understanding of subsequent ones, the school should provide for them. Likewise, in order to aid in gaining new percepts, materials are necessary for demonstrations or individual laboratory work. To bring the materials into the classroom in actual size and form is better than to employ models, pictures, or diagrams; but often the latter is necessary. If neither can be done, a trip should be made. By so doing, the teacher is including in the school environment or curriculum certain elements outside the classroom found in the community.

The textbook. In a final analysis, those who write and those who select the textbook for a course have a major part in determining the content of the curriculum. The high school has increased more rapidly than teachers adequately prepared in various fields have been trained. This factor, together with short tenure, has made the textbook the most important source of materials in the high school. It not only is used as a guide and a reference but often is the sole source of information in a course. There are relatively few teachers who can, with the aid of a state or local course of study, build their own courses of study to meet local conditions.

Following a text does not mean that courses cannot be enriched. The text may be used as a guide and other available materials used to adapt the course to the local community. Since textbooks must be national in scope, unless locally published, this enriching becomes necessary. Materials must be explained, brought up to date, and supplemented with pupils' and teachers' experiences, books in the library, and materials from the community.

Special plans for increasing educational offerings in small schools.

Because of limited facilities, small enrollments, and the few teachers in small high schools, special devices must be employed for enlarging and enriching the curricular offerings. These plans permit the pupils to come in contact with more experiences than they normally would. Several plans are commonly employed for enriching the curriculum.

1. *Alternation of Subjects.* This is the most common of all plans employed in smaller high schools for expanding the curriculum. The subjects that are usually alternated are those which are organically and vocationally alike. Those which lend themselves readily to alternation are physics and chemistry, biology and general science, algebra and geometry, the third and fourth year of a language, the second and third years of agriculture and home economics. If possible, those activities which all pupils should experience should not be alternated, because of the elimination from school. By alternating related electives, those who remain in school are given an opportunity to pursue them, and if both cannot be taken, the probability is that one will be as valuable as the other. An inherent evil in alternating subjects is the effect it has on transfer pupils. Often a pupil will transfer to another high school at a time when a desired course is not offered. The only solution is that of cooperation of all schools within the state in planning the years in which certain subjects will be alternated in order to secure uniformity in practice.

2. *Correspondence Courses.* Many state departments of education are recognizing work done by correspondence offered through the extension departments of universities and colleges. Courses in nearly all subjects are offered, and through them individual needs may be met. This could not be accomplished otherwise in small schools.

3. *Itinerant Teachers.* In many small schools, if there is sufficient demand, a teacher may be employed on a part-time basis to give instruction, most frequently in such subjects as agriculture, practical

arts, and homemaking. This plan is also practiced in giving instruction in music.

4. Fused, or Composite, Courses. Composite, or fused, courses are especially recommended for the small school as a means of correlating and enriching the curriculum and at the same time lightening the number of teaching periods a day for each teacher. This is to be preferred to alternating subjects. The first step in this type of correlation is that of combining courses in the same subject, such as a general course in science for the ninth and tenth grades, stressing the biological and geological phases, followed by a general course combining physics and chemistry in the eleventh and twelfth grades. In the same manner general courses may be organized in mathematics, social studies, and English.

The next step is that of correlating two or more subjects by constructing units which transcend subject-matter divisions. In initiating such a revision, it is better to combine only two fields at a time and later add other fields. Excellent combinations are science and mathematics, social studies and either science or English. Home, fine, and industrial arts may later be combined with the general units.

This method of correlating the curriculum is generally employed only in the required content or integrated curriculum, while the electives are organized as single subjects; but, by fusing the electives, pupils may be provided with an opportunity of experiencing a greater variety of activities than by other methods. These methods are to be preferred to the usual plan in small schools, in which there are eight 45-minute periods a day, with six to eight subjects assigned to each teacher. By correlating the curriculum, longer periods with fewer and more generalized subjects may be substituted.

General principles of organizing the curricula of the smaller high schools. Until larger administrative units are organized, consolidations effected, and costs equalized, the small high school will have to rely upon its own resources in bringing secondary education to rural youth. Rather than considering small high schools as temporary, every effort should be made to improve them while they do exist. A number of principles for small rural high schools are proposed:

1. Only teachers who have the interests of rural youth at heart should be employed in small rural high schools. Small rural high schools are not the best training grounds for teachers in urban schools. Teachers in rural

high schools will have, or should acquire, an understanding and appreciation of rural life and character.

2. The small high school should not be too ambitious. The limited facilities should be recognized, and a program placing too much work on teachers should be avoided.

3. It is almost necessary to include college-entrance subjects in the curriculum for the benefit of those who will go to college. They should be placed in the junior and senior years as electives.

4. The curriculum may be enriched and individual needs met by alternating subjects, by giving credit for correspondence work and work outside of school, by employing part-time teachers for special classes, and by integrating the curriculum about units which transcend subject-matter divisions.

5. Small high schools should not offer more than one foreign language.

6. If vocational subjects are offered, they should be in the fields of agriculture, home arts, and industrial arts.

GENERAL PRINCIPLES OF CURRICULUM PLANNING

There are a number of general principles for constructing and administering the curriculum of secondary schools. The more important of these are the following:

The curriculum should be flexible. Flexibility is necessary if pupils are to be served, especially in the junior high school. If a pupil enters one curriculum and after several weeks finds that he does not have any special interest or aptitude in that field and that another is more appealing, he should be able to transfer without difficulty and without loss of time, for all curricula should contain courses of study furthering the general aims of secondary education, and all vocational courses should have social as well as vocational value. Likewise, transfer from one course of study to another should be made easy, and without loss, even though a pupil has spent several weeks in one course and then dropped it to start another.

Flexibility should be practiced in the selection of materials, in organizing them, and in grade placement. There are a few curricula so well planned that changes need not be made. When it is considered to be for the best interests of the pupils, changes should be made at once. For example, a unit may be planned in advance providing for certain activities and a certain number of class periods. During the process of teaching the unit, if it is found that certain materials are not available

or that pupil interests are along other lines, the teacher should feel free to change her plans.

The secondary-school curriculum should be articulated with that of the elementary school. To avoid a gap between the elementary and secondary school, to prevent overlaps and omissions, and to provide a continuous, integrated, and articulated program through the entire school system, junior-high-school subject matter should be selected with a consideration of the work of the upper grades of the elementary school. For those schools organized on the 8-4 plan, the eighth and ninth grades should be articulated. One of the best methods of doing this is to build the curriculum only after a study has been made of the specific disabilities and abilities, special talents, interests, and needs of those entering high school. These may be determined partly through a study of the curricula of the elementary schools from which the pupils came, an examination of any records from the school, and the administering of diagnostic and achievement tests. These factors will be determined only partly at the time of entrance. A continuous study is necessary to analyze the pupils completely.

If weaknesses in various pupils are observed, the secondary school should proceed to remedy them, even though there may be a feeling that this is the work of the previous school and not that of the secondary school. A few years ago the authors discovered a college senior who did not know the multiplication table. She found a product by successive additions, keeping tally of the number of times added on her fingers. The secondary school and university had not discovered this inability until she was almost ready to graduate and find a position teaching in a junior high school. It is needless to say that, after the discovery, the first assignment given her was to learn the multiplication table. One might consider this a rather elementary assignment for a college senior, but this was a specific need and illustrates the principle of making a final selection of subject matter after becoming acquainted with the pupils. This does not preclude a previously selected and planned program of activities; it supplements such a program.

Small schools should not try to offer too many courses. Small secondary schools should not try to offer too many courses. It is far better to group all offerings about the main fields of science, social studies, English, arts and crafts, and physical education than to break

these into many specific courses and try to offer a large number. Too many offerings increase the teaching loads beyond the point of efficiency. Suggestions were offered in a previous section on how to enrich the curriculum in the smaller high schools. The methods were alternation of subjects, correspondence work, combining subjects, and the itinerant-teacher plan.

The curriculum should conform with state and local laws. There are some subjects or topics required to be taught in public schools by various states. Regardless of whether curriculum makers are in agreement with these prescriptions or not, they must be included in the curriculum.

The curriculum should be dynamic and life-centered. "Dynamic" means that the curriculum should constantly be changed in order to meet the needs of youth in a changing community. Each pupil should be considered as an individual with rights, duties, and responsibilities, rather than as an economic unit. The school should strive through the curriculum toward the maximum development of every youth in personality, understandings, correct attitudes and appreciations, and special interests. The pupils, rather than the subject matter, should be the center of the curriculum.

The development of integrated personalities should be a primary function of the curriculum. All phases of each youth, rather than parts, should be developed. Each learning experience should be centered in life situations, and a wide variety should be included to assure reaching all pupils. To facilitate this, subject matter should be fused, correlated, or integrated as much as possible.

The curriculum should be planned to meet the needs of all youth. The curriculum must be broad, flexible, dynamic, and life-centered. It should be enriched by utilizing community resources, co-curricular activities, the school library, and a number of elective courses.

The curriculum should further the general aims of education and the specific aims and functions of the secondary school. These should be known and given primary consideration in curriculum planning. All curricular activities should contribute to these aims and functions.

The curriculum should provide for the imperative needs of youth and also for their special interests. There should be a common body of subject matter required of all youth and elective courses to provide for special interests. The common learnings should be organized into units

transcending subject-matter lines, which will require a modification of the traditional method of organizing subject matter.

The immediate rather than the future needs of pupils should be given primary consideration. Materials should be placed according to pupils' needs, based on a study of these needs; maturity and continuity should be considered; subjects valuable for exploration and valuable in guidance should be placed early in the curriculum; and college-preparatory courses should be placed late in the curriculum.

College-entrance requirements must be met even in the small school to satisfy the needs of those who will go to college. This may not satisfy the needs of those who do not go to college, but it is necessary until colleges change their requirements.

The curriculum should be adapted to the local situation.

The ratio of constants to electives should decrease from the seventh through the twelfth grades.

Curriculum development should be continuous rather than saltatory.

There should be a curriculum committee constantly working on the offerings of the entire school, and each teacher should work at all times on each course she teaches.

In subsequent chapters, the characteristics, needs, and interests of adolescents will be considered, followed by a discussion of each subject of the suggested curriculum.

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9

THE CURRICULUM: CHARACTERISTICS, INTERESTS, AND NEEDS OF ADOLESCENTS

The curriculum for any school or division should be constructed specifically for those who will pursue it, and the selection of content should be based on a study of that group. Since the secondary school is designed for adolescents, it is essential that the curriculum be based on a study of adolescents. The study should include the following, which furnish a basis for the curriculum:

1. The growth and development of adolescents.
2. The characteristics, interests, and needs of adolescents—those which are common to all and those for special groups.
3. The experiences of youth which are natural for them.

Without this knowledge, the high school will be ineffective and striving blindly to accomplish an undefined task. The more we know about the characteristics of high-school youth and their behavior, the more helpful we shall be in helping them develop normally. Many adolescents engage in behavior which has great developmental significance and yet may be very annoying to adults; but once we know youth and some of the reasons for their behavior, the easier will be the task of modifying it and planning a curriculum suited to that end.

THE GROWTH AND DEVELOPMENT OF ADOLESCENTS

Definition of adolescence. The term "adolescence" comes from the Latin word *adolescere*, which means to grow up, or to mature. Roughly speaking, the growth of an individual may be divided into

three periods: preadolescence, or from birth to puberty; adolescence, or that period between the time when the procreative organs develop to maturity; and postadolescence, or from maturity to death. High-school pupils may be divided into three groups with respect to puberty: prepubescent, pubescent, and postpubescent. The ages at which these periods occur fall between the general limits of 12 to 20, although exceptional persons may reach puberty before 12 or after 20.

These periods are not sharply marked, for there are no fixed turning points. None of the physical indications marking puberty are satisfactory, for they lack objectivity and changes are not abrupt, but gradual. Likewise, to determine the degree of maturity by behavior is unsatisfactory, for an adolescent will be childish in one respect and mature in another; and, finally, the rates of physical, mental, moral, and social growth are unequal.

Adolescence, then, is a period of one's life without fixed limits, and the time of occurrence and the duration vary with different individuals. In this present discussion, the term "adolescent" refers to high-school pupils regardless of their stage of development or age.

It might appear that individual variations are so great that a group study of adolescents would be precluded, but such a study is possible because there are many common characteristics which typify the average or normal adolescent who might be considered as a composite of many. The secondary-school teacher should be cautioned in applying averages to an individual. Adolescents may be grouped for study and for instruction, but they must be treated as individuals within these groups. The value of group study is to determine general characteristics or patterns of behavior in order that one may be more tolerant, sympathetic, and understanding of high-school pupils.

Methods of securing information concerning adolescents. There are many popular fallacies and erroneous beliefs prevalent concerning the adolescent. Many of these may be traced to the work of G. Stanley Hall whose two volumes on the adolescent are still influencing our beliefs concerning this stage of development, though many of these beliefs did not originate with Hall. The recognition of stages in the development of an individual life was recognized by Aristotle, reemphasized by Comenius, and made a vital principle by Rousseau. Rousseau was perhaps the first to introduce the "saltatory" theory of de-

velopment,¹ that is, that new traits emerge suddenly, by leaps and bounds, as against the modern view that all traits are present at birth and develop concomitantly save as they are affected by the environment.

Rousseau called the period from 12 to 15 the "age of reason." He claimed that parents were in error when they supposed their children capable of reasoning at an early age and that children should learn to be satisfied with mere words even if they could not understand them.² He was also the originator of the recapitulation theory, that is, employing the history of the race to explain the development of the individual.³ This theory has little value in illuminating individual development and educationally is not sound. On one point, however, Rousseau made an excellent contribution. He pointed out that the child is not a miniature adult. During Rousseau's time, children were dressed and treated as though they were little men and women, rather than immature beings with different characteristics and different modes of thinking, acting, and feeling about their environments.⁴

Other fallacies arise from unscientific methods of study and from the propensity to generalize from a few specific instances. Some theories prevalent a few decades ago and still held by some are (1) that adolescence is a time of abrupt, radical, and far-reaching changes; (2) that these changes take place in the physical, moral, mental, social, emotional, and religious life of the individual; and (3) that these changes are stimulated or caused by physiological changes associated with pubescence.⁵

Dimock⁶ illustrated the extent to which various beliefs are still present as holdovers from the recapitulation and individualistic psychology of the early twentieth century by giving a number of statements about the adolescent to several hundred professional workers with adoles-

¹ Frederick Eby and Charles F. Arrowood, "The Development of Modern Education," p. 472, Prentice-Hall, Inc., New York, 1936.

² *Ibid.*, p. 498.

³ *Ibid.*, p. 471.

⁴ *Ibid.*, p. 467.

⁵ Hedley S. Dimock, "Rediscovering the Adolescent," p. 252, Association Press, New York, 1937.

⁶ *Ibid.*, pp. 254-255.

cents. The majority of the workers checked as true the following statements, which recent studies have shown to be false:

1. The characteristics of adolescence are distinctly different from those in the preceding period.
2. Adolescence is a time when religious experience is most likely to emerge.
3. Adolescence is the most crucial and significant period of life.
4. An individual usually becomes more clumsy and awkward during adolescence.
5. The biological and physical changes in adolescence are largely responsible for moral, social, and religious changes.
6. The development of childhood and adolescence reflects the stages in man's racial evolution.
7. The gang is a natural and almost inevitable accompaniment of adolescence in boys.
8. Adolescence represents a new birth, when the higher and more completely human traits are really born.
9. Character and personality begin to take definite form in adolescence.

It is easy to arrive at a false cause for an observed action or to designate, as peculiarly adolescent, characteristics which one has in his entire life. Likewise, many traits of adolescents are the results of a normal growth and increased chronological age, and their occurrence apparently in conjunction with puberty is not evidence of a cause-and-effect relationship.

Adult Remembrance. One method of gaining information concerning adolescents is to ask adults about their lives during this period. The weaknesses of this are obvious. An adult is inclined to interpret the past in the light of the present, and if his behavior is of a certain nature as an adult, he is inclined to believe it was the same when he was an adolescent. Likewise, adults overestimate or forget.

Popular Literature. Popular writers, lecturers, and cartoonists either describe or picture the adolescent in caricature, that is, exaggerate traits and peculiarities in order to produce a laughable effect. The reader, not knowing that these traits have been magnified, is likely to believe them to be true characteristics.

Faulty Methods of Investigating. Many of the earlier students of the adolescent employed the questionnaire or interview technique of securing data. By this method, it was concluded that certain traits and

characteristics were limited to this period, while actually these traits might have been possessed both before and after this period. For example, if the question were asked, "Did you have strong religious convictions during adolescence?" the one interviewed by answering "yes" might not mean to say that this was the only time in his life he had them, although this inference might be made. These results, unreliable in many respects, formed the basis of many conclusions concerning the adolescent, and impressions have been collected and perpetuated.

Direct Observation and Study. The most accurate manner of obtaining information concerning the adolescent is that of going directly to him and making exact measurements and accurate observations. Even this method is difficult, for often an adolescent is reticent in revealing his true feelings, emotions, or beliefs. Physical measurements are more exact, but we still have much to learn concerning the social, emotional, religious, and moral characteristics and growth of adolescents.

Even though certain behavior patterns are observed at this period, it is difficult to assign a cause to them. Merely because two events occur simultaneously, or in close sequence, is not evidence that one is the cause or antecedent of the other. Both may be effects of a deeper cause, or they may be results of natural maturity, physically and socially, and independent of each other.

Physical growth. The most observable results of growth at the time of puberty or early adolescence are changes in height and weight. Growth is rapid during this period. There is increased height, elongation and ossification of bones, and a rapid growth of muscle tissue which causes an increase in weight. This period of growth is rapid, especially when contrasted with the preadolescent, when growth is stabilized. The control of the muscles lags behind their growth, causing a temporary lessening of rhythmic action. However, there is substantial improvement in motor ability at the time of most rapid growth in height and weight, although less than the year just prior to puberty. Often a consciousness of this extra size and weight causes an adolescent to be shy, tongue-tied, and retiring or to try to divert attention from himself.

Sex Differences in Physical Growth. The growth of boys is not the same as that of girls. From birth to early adolescence, boys exceed girls in both height and weight, but beginning from about the tenth

to thirteenth years girls exceed boys in height, and from about the ages of 10 to 16 they exceed them in weight (Figs. 13 and 14). After these ages, boys again are taller and heavier than girls, since girls complete their growth several years before boys.

There is also a change in bodily proportions. The legs are too long, subcutaneous fat is lost, giving an added thinness, the arms are gan-

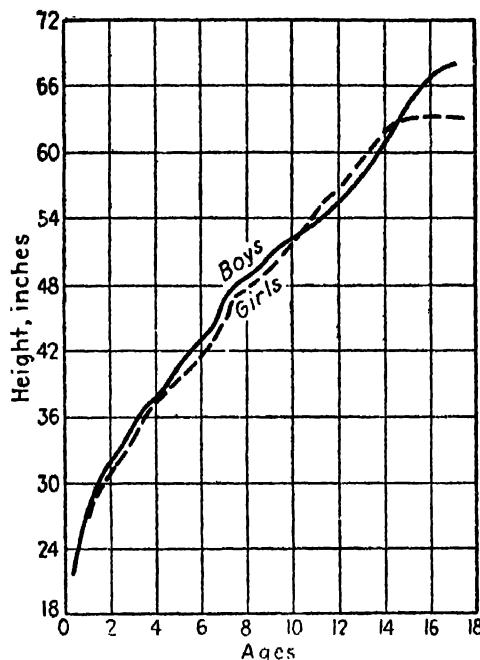


FIG. 13. Average height of boys and girls from birth to maturity. [B. T. Baldwin, *The Physical Growth of Children from Birth to Maturity*, *University of Iowa Studies in Child Welfare*, 1 (No. 1, 1921), pp. 63, 64, 74, 75.]

gling, and ankles and wrists seem to be fragile in contrast to large hands and feet.⁷

It is believed by many that adolescents have high blood pressure due to a disproportionate rate of growth of the heart and the main arteries, as found by measuring their diameters. When data are graphed on the basis of cross-sectional areas of the arteries and the volume of the heart, the rate of growth of the two is closely related. Therefore, if there is an increase in blood pressure at the time of adolescence, it

⁷ Luella Cole, "Psychology of Adolescence," 1st ed., p. 26, Rinehart & Company, Inc., New York, 1936.

is probably due to other causes, and any hygienic warnings based upon erroneous interpretations of growth rates should be disregarded.⁸

It is normal for adolescents to experience faintness, dizziness, palpitations, headaches, and restlessness. In athletes, care should be taken not to cause overexertion or overstrain. Plenty of rest is needed, as well as exercise. Likewise, moderation should be practiced in such

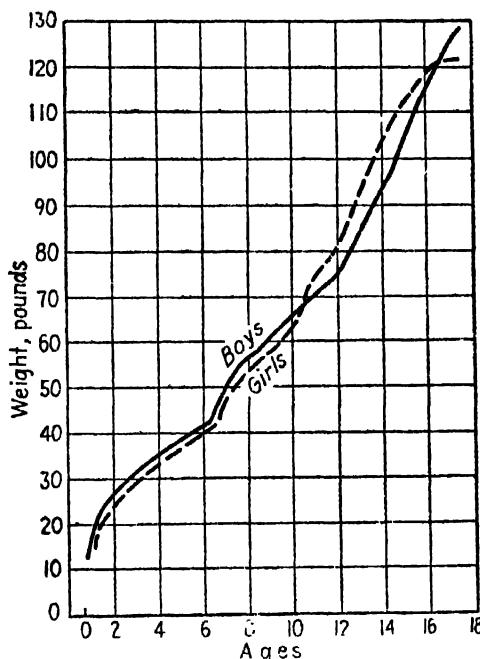


FIG. 14. Average weight of boys and girls from birth to maturity. [B. T. Baldwin, *The Physical Growth of Children from Birth to Maturity*, *University of Iowa Studies in Child Welfare*, 1 (No. 1, 1921), pp. 63, 64, 74, 75.]

activities as dancing, smoking, late hours, and eating. Undue emotional excitement should be avoided.

There are changes in the digestive system, causing changed appetites and digestive disturbances. Although the brain increases in complexity, it increases very little in gross size. Certain glandular disturbances may also occur. In boys, the voice changes in pitch and quality, often causing some embarrassment.

⁸ Peter V. Karpovich, Textbook Fallacies Regarding the Development of the Child's Heart, *Research Quarterly of the American Association of Health and Physical Education*, 8 (October, 1937), pp. 33-37.

Puberty. Although the average age of pubescent boys has been estimated to be near the age of 14 and that for girls over a year less, the variation is so great that one cannot tell from chronological age alone whether an individual is prepubescent, pubescent, or postpubescent. For girls, the variation is from 9 to 18 years of age; for boys, it is considerably less, being from 12 to 18.

In a typical six-year high school, for every 100 thirteen-year-old pupils, one will find the following degrees of variation: *

- 70 girls will be physically mature.
- 30 girls will be immature.
- 15 boys will be physically mature.
- 85 boys will be immature.

For every 100 fifteen-year-old pupils, the following variations will be found, or these variations will be found in the same pupils two years later:

- 95 girls will be physically mature.
- 5 girls will be physically immature.
- 85 boys will be physically mature.
- 15 boys will be physically immature.

It will be seen that, between the ages of 13 and 15, the greatest changes in physical development take place, the majority of girls reaching puberty earlier than boys. It should also be noted that this distribution does not indicate the extreme variations which will be found.

The criterion for determining the onset of puberty, as the term is most commonly used, is the maturing of the sex glands, for puberty consists essentially in the development of these glands. Many factors are associated with the age of maturity, as sex, climate, race, locality, intelligence, and the physical conditions of the individual. Because of differences in growth due to these factors, other differences will occur which have implications for curriculum development: differences in interests, readiness, emotional maturity, attitudes toward oneself and others, and differences in social development.

Mental growth. There are two chief measures of mental development, or growth: the mental age (M.A.) and the intelligence quotient

* Luella Cole, "Psychology of Adolescence," 3d ed., pp. 55-56, Rinehart & Company, Inc., New York, 1948.

(I.Q.). The former, mental age, represents mental development in terms of growth units found by securing the average mental ability of pupils of different chronological ages. For example, a mental age of 12 means the mental maturity of the average 12-year-old boy or girl. Mental age increases gradually from birth to maturity. After the ages of 9 or 10 each year's increment is less than the previous one. About the ages of 14 to 16, growth decreases in rate to the extent that intel-

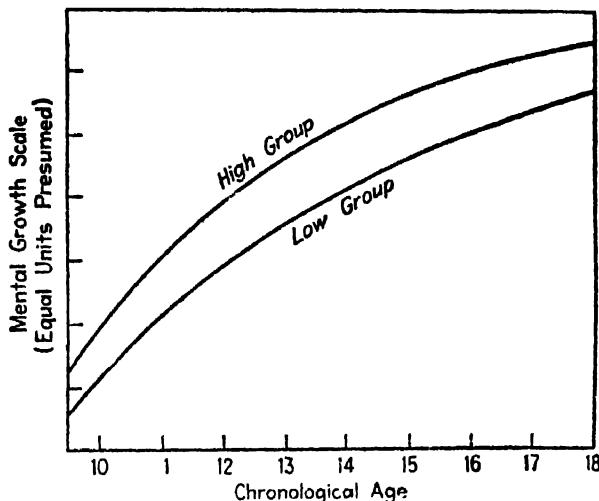


FIG. 15. Growth in mental abilities for a high and low group of individuals. [F. N. Freeman and C. D. Flory, *Growth in Intellectual Ability as Measured by Repeated Tests*, *Monograph of the Society for Research in Child Development*, 2 (No. 7, 1937), National Research Council, Washington.]

ligence tests are unable to measure accurately further increments. This does not mean that mental growth has ceased, but that the rate of growth has become quite slow. The upper limits of growth are not known, but investigations show there is growth to the ages of 17 and 18, and perhaps it continues beyond the teen age.

Differences will be found in the average growth rate of pupils. These may be due to a slow rate of advancement and because some pupils are low in the mental trait measured. The growth curves of two such groups are shown in Fig. 15. Growth for individuals may be at an average rate throughout; slow beginning but higher later; high beginning but slower later; or other possibilities of changes in rate as students mature. Growth curves of mental ability also reveal that each child has his own optimum and each one may arrive at his optimum

through varying rates of growth, due to the environments in which he lives.¹⁰

Developmental rates of each pupil should be known if teachers are to aid in choosing curricula. It must be kept in mind that growth rates in one trait usually differ from those in others and that aptitude measured at any one time may be erroneous. These facts suggest that curricular activities should be selected with a knowledge of the maturity level of pupils, for experiences forced upon pupils before they have reached the maturity level for them may result in conflicts, low achievement, or achievement which is soon lost. It also suggests that a longer educational period for some pupils than for others may be necessary.

In both curves shown in Fig. 15, there is no evidence of a rapid growth period or spurt in mental ability. There is one in physical growth (Figs. 13 and 14), but there is no corresponding rapid mental growth. Growth curves in mental ability for groups and for most individuals are gradual and regular. If irregularities for an individual occur, they are due to abrupt changes in the environment, changes in health, or errors in measuring mental growth.

The intelligence quotient. The intelligence quotient, or I.Q., is a measure of brightness or dullness. It is the ratio between mental age and chronological age and is found by dividing the mental age (M.A.) in months or years by the chronological age (C.A.) in months or years. For example, if one's M.A. is 12 years and his C.A. is 12 years, his I.Q. would be 12 divided by 12, or 1.00. This is multiplied by 100 to avoid the use of decimals and becomes 100. This pupil is said to be normal, for he has the average mental ability for those of his same age. Intelligence quotients above 100 indicate that mental growth has been rapid. Such pupils learn more rapidly than others and are said to be bright. Those with I.Q.'s below 100 have had a slower rate of mental development and are subnormal or dull.

One should make a clear distinction between the I.Q. and the M.A. The M.A. increases with age; the I.Q. during high school is relatively constant. Two pupils may have the same I.Q. but differ widely in their mental ages, and, conversely, they may have the same mental age and differ in I.Q. Likewise a pupil's I.Q. will remain the same from year

¹⁰ David Segel, *Frustration in Adolescent Youth*, U.S. Office of Education Bulletin 1, 1951, pp. 5-9.

to year as long as the relationship between his mental and chronological ages remains the same. For example, a child who is 10 years old and has a mental age of 12 has an I.Q. of 120. If his I.Q. is to remain constant, his mental age must have reached 14.4 years by the time he is 12 chronologically.

There is much discussion as to the constancy of the I.Q. When we say constant, we usually mean that the relationship between successive testings is high. Another meaning is that one keeps the same relative position from the mean of the group measured on that scale.¹¹ Although there are changes in the indicated I.Q. from repeated testings, these do not vary markedly for high-school ages. The greatest amount of change is during the period of childhood when marked changes have been noted, especially when accompanied with a radical environmental change. The I.Q. becomes more stable with maturity.

Apparent changes in the I.Q. are probably due to the unreliability in the measuring instruments employed rather than to actual changes in the I.Q. itself. Although problems concerning the causes of changes in the I.Q. are far from being solved, the authors are of the opinion that much of the apparent fluctuation is due to this lack of perfect reliability. It is quite probable that many changes would occur in the magnitude of coefficients of correlation found between retesting of the same individuals if proper allowance were made for the unreliability of the tests used.

Since there is not a perfect relationship between successive testings, the question may be asked, "What change may be expected during high school?" If one's I.Q. is 100 upon entering high school at the age of 14, the evidence shows that there is about 1 chance in 22 that during a four-year period it will increase or decrease as much as 12 points, and 1 chance in 3 that it will change as much as 6 points.¹² Hildreth found from retesting 441 school children on the Stanford-Binet tests that the chances are about 1 in 21 that a pupil will change 14 points of I.Q. even when there is not a systematic attempt to alter it.¹³

¹¹ Walter F. Dearborn and H. H. Long, On Comparing I.Q.'s at Different Age Levels on the Same Scale, *Journal of Educational Research*, 18 (November, 1928), pp. 265-274.

¹² Walter Van Dyke Bingham, "Aptitudes and Aptitude Testing," p. 40, Harper & Brothers, New York, 1936.

¹³ G. Hildreth, Stanford-Binet Retests of 441 School Children, *Journal of Genetic Psychology*, 33 (1926), pp. 365-386.

Relationship between mental and physical growth. Baldwin found that there is a marked relationship between mental and physical growth. The coefficient of correlation between mental age and anatomical index was .87. This means that those secondary-school pupils who are more mature physiologically are also more mature mentally.¹⁴

Emotional and moral development. It has been said that adolescence is the "heyday" of the emotions. High-school pupils have been described as giggling, erratic, vivacious youth. They change their moods rapidly, and one is never sure what mood will be dominant on any occasion. They may shout, cry, or be solemn at a football game and giggle in church at one time and be moved to tears a few moments later. Often they will be defiant of authority, show a disrespect for old age, or show such inconsistencies as to write an essay on respect for law and then show no respect for it. In school, they will occasionally doubt well-established facts. They are secretive, and romance seems to be a part of their lives. Temporary success elates them, and failure depresses. Their pride and vanity are easily flattered and wounded. Their emotions seem to drive them from one extreme to another.

There are three primary emotions during adolescence: love, fear, and anger. These three may be used as a basis of determining emotional maturity.¹⁵ A boy or girl may be mature in one and not in the others, for they do not necessarily develop at the same rate. Some of the evidences of immaturity are too much or too little anger or inability to control temper; inability to face responsibility and a constant tendency to make excuses for mistakes; possession by so many fears that life is unhappy; a feeling of insecurity; worry over slight errors; and inability to face criticism. Conversely, those who are more mature control their tempers, will accept responsibility, do not need flattery and praise to do their best work, know their own limitations, and have a feeling of general security. Few adolescents pass all these tests.

Added to these emotional conflicts, the adolescent is troubled with various "strains." These are caused by changes taking place in his physical development and his attempts to make adaptations. Feeling

¹⁴ B. T. Baldwin and Lorle I. Stecher, *Mental Growth Curve of Normal and Superior Children*, *University of Iowa Studies in Child Welfare*, 2 (No. 1, 1922).

¹⁵ Marguerite Malm and Olis G. Jamison, "Adolescence," pp. 198-201, McGraw-Hill Book Company, Inc., New York, 1952.

that adults do not understand him, he withdraws from them. Physically he no longer looks like a child, and although he is not mature, he is supposed to behave like a man. He is neither the one nor the other. He will be told by his parents at one time to stop acting so childish, that he is now a man, and on the next occasion, when he attempts to make a decision for himself, his parents or teacher will do it for him, telling him he is only a child!

A number of complex emotions, as admiration, reverence, gratitude, scorn, contempt, hatred, joy, grief, pity, and shame, are increased during adolescence. They are present in childhood but reach maturity during adolescence.

Moral Development. The moral development of an adolescent is closely related to emotional development. There are two types of thinking: rational and emotional. If one's emotions are not mature or under control, he is likely to act on impulses rather than reason. A strong sex drive, the desire to keep up with the crowd, extreme anger, hate, or jealousy may cause adolescents to do things their better judgment would condemn. It is not merely a coincidence that the curve of religious conversion and of crime reach their apex at about the same age, for the same emotions responsible for crime may also be responsible for interest in religion. Growth and physical make-up furnish the emotion, but environment determines the outlet it will take. Environment is the chief factor in determining the character of moral development. It is not an accompaniment of pubescence or of physiological age.

If the school furnishes a wholesome environment, a curriculum adjusted to each pupil, an enriched program of activities, opportunity for finding directed emotional outlets in contests, games, and group cheers and singing, and supervised social activities, adolescents are not so likely to seek outlets on the streets and highways or in public amusement centers and dance halls.

Dishonesty. May and Hartshorne, who made extensive studies of the honesty of adolescents, found that dishonest behavior correlates directly with a number of factors:¹⁶

¹⁶ Luella Cole, "Psychology of Adolescence," 1st ed., p. 157, Rinehart & Company, Inc., New York, 1936. Based on conclusions found by M. May and H. Hartshorne, "Studies in Deceit," Vol. I, pp. 408-412, The Macmillan Company, New York, 1928.

The intelligent pupil cheats less on school tests than the unintelligent, but both the intelligent and stupid cheat more in social situations than the child of average mental ability. Educational maladjustment leads to dishonesty, as shown by increased cheating on the part of retarded children. Emotional instability and suggestibility both correlate positively with dishonest behavior. The level of honesty tends to be similar among friends or among members of the same family. Finally, honesty correlates highly with the economic and cultural level of the homes from which children come.

The implications for teachers from the studies of deceit are as follows: Teachers can expect cheating in schoolwork from about 35 per cent of children having average ability, from about 75 per cent of dull pupils, and even from 25 per cent of the brightest pupils. In athletic contests and social parties, a teacher can expect dishonest behavior from between 30 and 50 per cent of adolescents, without respect to the level of intelligence.

Just as one enters a secondary school with a limited ability in certain subjects and is caused to develop and grow in that field through proper instruction, so must one be aided in developing morally. Character training, especially in honesty, must be provided.

Daydreaming. Daydreaming, if not carried to excess, is not harmful. It is a means of satisfying thwarted desires or of escaping the realities of life. Daydreams are usually centered around the dreamer himself, who becomes the hero. Often they are used as a retreat from some difficult task that requires work or courage to complete. Again it will take the form of self-pity, usually motivated by an idea that the dreamer has no friends or that parents or teachers are not treating him justly. Love affairs, failure on a test, punishment at school, and lack of money, friends, or popularity will cause pupils to spend hours daydreaming. Much of this can be cured by introducing the adolescent to good literature. By reliving the lives of characters of fiction, he substitutes adventure for dreaming.

ADOLESCENT TENDENCIES, DRIVES, AND PROBLEMS

There are many activities and behavior patterns which seem to be characteristic of adolescents. These activities are not peculiar to them, for they are present with all persons, but they seem to be more pro-

nounced and more in evidence at this period. Many of these are hard to explain or to account for. In the past, because of the difficulty of explaining adolescent behavior, the term instinct was used very frequently. This was of little help to teachers, for it implied that all tendencies were innate rather than learned, and did not aid in an understanding of them or in helping teachers determine the cause of various activities and drives. More recently, the terms drive, tendencies, and urges have been used; however, these would be of no greater value than the term instinct if no attempt were made to understand the causes of these behavior patterns.

Adolescent tendencies. There are many drives and tendencies which have been observed in adolescent behavior and have been reported in educational and in popular literature. Only a few of these will be presented, selected on the basis of value to teachers in securing motivation and in aiding students to solve their problems, understand themselves, and become better adjusted.

Self-assertion. Self-assertion may take many paths: to get power over objects, to get power over people, to defend oneself against one's environment, and to resist control by others.¹⁷ These tendencies manifest themselves in desiring to control some object which may be manipulated and which moves, to be elected to class offices or be managers of groups, and to attract attention by dress or jewelry. In resisting control, adolescents will often pretend to have headaches, to be ill, or to faint. Often this resistance will assume the form of stubbornness. Few high-school pupils are so submissive that they never rebel against those in authority.

Gregariousness. The desire to be a member of a group is a strong drive toward organizing clubs, fraternities, and gangs. Adolescents enjoy passwords, secret signs, and initiations. If the school does not have a well-organized program of activities, clubs will be formed outside the school and will give rise to fraternities that are not desirable. This tendency can be used to great advantage in promoting activities in school. Likewise, pupils do better work when grouped in classes with those who are of the same level of development and who belong to the same social group.

¹⁷ Luella Cole, "Psychology of Adolescence," 3d ed., pp. 117ff., Rinehart & Company, Inc., New York, 1948.

Peer Culture. Closely related to gregariousness is peer culture, which is defined as the life and ways of the same-age group within which an adolescent finds himself.¹⁸ The opinion of the group has an important influence on the behavior of youth. Boys and girls seem to care more about what their friends think about their manner, dress, conduct than what their parents or teachers think about these things. What the adolescent does is usually in accord with what his associates think he should do. He wants to be accepted by them, and acceptance depends upon doing those things which are approved by the group. This tendency accounts for changes in style of clothing, fads in hair styles, using certain slang expressions, and many of the peculiar and unusual mannerisms which will occur suddenly among adolescents and as suddenly change for some new pattern of conduct. It is quite common to hear an adolescent say, "Everyone is doing it" when actually only her peers are included in the statement.

Imitation. Imitation is a drive that is present at a much earlier age and continues beyond adolescence. It is detected in dress, manner, speech and in almost all activities of high-school pupils. It can be used to great advantage in building character by setting models to be imitated or characters to be emulated.

Attraction toward the Opposite Sex. One of the strongest drives during adolescence is an increased attraction to the opposite sex. Although sexual attraction has been present before adolescence, it becomes much stronger after the onset of puberty. This sexual awakening is responsible for the numerous adolescent love affairs which often become extremely serious, causing emotional disturbances, daydreaming, and jealousy. Boys will usually "show off" in order to attract the attention of girls, and girls will enjoy or pretend to enjoy the activities of boys. These love affairs usually are not of great duration. To adults, they are interesting, amusing, and often annoying. When adults oppose certain activities caused by love affairs, adolescents usually feel that they do not understand them and, for this reason, adults are not taken into their confidence.

Some of the major problems of adolescents. Adolescents are constantly confronted with problems which to them are serious and difficult to solve, even though they may not seem of such importance to adults. They are confronted with problems because they have reached

¹⁸ Malm and Janison, *op. cit.*, pp. 115-118.

a higher stage of maturity and have started expanding their environments and because of physiological changes which have occurred, causing certain urges and drives to be more pronounced. Because sex organs are maturing at the time of puberty, it is often thought that the sex drive is the dominant one in the lives of all adolescents. It is one of the strongest, but there are others which are equally strong, such as interests in athletics, hobbies, and association with others of the same sex. Engaging in these and other activities brings its own problems. These may be classified according to the area about which they are centered. Some of the problems centered about the adolescent himself are:¹⁰

1. How can I become more attractive? How can I improve my personal appearance?
2. How can I improve my personality?
3. How can I develop self-confidence?
4. How can I quit worrying about little things?
5. How can I get dates with boys when I am not supposed to ask them for one?
6. How can I be sure the friends I make are the right ones?
7. What lifework would be the best for me?
8. Should high-school students pet and make love?
9. How can I keep from gaining weight?
10. What is the right and true religion?

Many problems are centered about the home, school, and community. They pertain to clothing, taking part in home responsibilities, money, schoolwork, joining organizations, and attending college after graduating from high school. Many of these cause students to worry and distract their attention from their schoolwork and to be silent, retiring, or morose. Some of the problems centered about the home, school, and community are:

1. How can I have a room of my own and a place to keep my own things?
2. What is my share of the housework, and what are my responsibilities at home?
3. How soon can I be my own boss and go and come without having to ask my parents?

¹⁰ *Ibid.*, pp. 54-56.

4. Should I choose my own clothes?
5. Since my parents quarrel frequently, how can I be sure they are not going to separate?
6. How old should I be before I get married?

These problems are more or less of a continuing nature or those which confront pupils for some time before they arrive at a satisfactory answer or solution. There are many others which are of a more immediate nature which are considered serious by students and which are most disturbing to parents and teachers. Some of these are:

1. Which dress shall I wear to school today? Or wear to the party?
2. Shall I have a date with Bob or Jim since both asked me?
3. Shall I go to the show tonight or stay at home and study?
4. Should I use my allowance to pay my church pledge, or is this something extra my dad should pay?
5. How much help can my parents give me on a homework assignment before it is cheating?
6. What shall I do! Dad wants the car tonight, and I promised to take the gang to the game in it.
7. Should I buy my girl a corsage for the dance tonight?
8. I've asked June for a date, and I don't have any money. What shall I do?

Adolescent interests. Adolescents have many and strong interests. Often, when they fail to concentrate on school problems, teachers believe they have no interest or lack the ability to concentrate. Actually, they are interested in something else and are probably day-dreaming or concentrating on it. They will fluctuate between having brief intervals of absorption in sporadic pursuits and a sustained interest in intellectual material.

All interests are acquired; none are innate. For this reason, one cannot say what the interests of a given individual are until an inventory of them has been taken. Interests are a product of the environment, and a knowledge of the total environment would be necessary to know what they are. They may be determined through observations of pupils' activities, through their conversations and responses in class, through their reading and hobbies, and through the topics they select in writing papers. Each teacher should make a special attempt

to determine the interests of each student, either by observations or by means of inventories. Interest inventories may be constructed by teachers, or standard ones may be employed.²⁰

Considered collectively, the interests of adolescents are reflected in their problems, which have been mentioned. Considered as individuals, they may be interested in any phase of human activity. In a class of 25 to 30 pupils, one may find almost a cross section of interests. Furthermore, since interests are created, teachers may, through various teaching techniques, create interests in practically any subject or phase of a subject.

The one thing for teachers to avoid doing is to assume that pupils are or are not interested in any particular thing or that all adolescents have common interests. Acting on generalizations may be misleading, if not harmful. Teachers should also refrain from assuming that the interests of one pupil are those of another or that her own interests are those of her pupils. Forcing adult interests on adolescents is never a sound principle.

THE NEEDS OF YOUTH

The needs of youth cannot be assumed or determined by speculation; neither can they be determined wholly by the activities of adults, for this assumes that the youth of today should or would behave when mature just as adults did at the time the survey was made. They must be determined by a careful study of youth, his natural experiences, and requirements which must be met in his vocational, family, citizenship, and social responsibilities. There is no purely scientific method of determining the needs of youth, and for that reason any listing of them must be based at least in part on judgment, for it is impossible to determine exactly what youth needs now and less possible to determine what he will need in the future.

Any enumeration of the needs of youth must be general in nature if they are representative of or common to all youth. A recent study of the needs of youth made by the Educational Policies Commission of

²⁰ Strong's Vocational Interest Blank, Stanford University Press, Stanford, Calif.; Cleeton Vocational Interest Inventory, The Psychological Corporation, New York; Pressey Interest-Attitude Tests, The Psychological Corporation, New York; and Thurstone Interest Schedule, The Psychological Corporation, New York.

the National Education Association is a restatement and an enrichment of the seven cardinal principles of secondary education. These are judged to be common to all youth and may be used as one of the bases for selecting the content of the general curriculum, and through variation and expansion of these provision can be made for special interests. The common and essential needs that all youth have in a democratic society are: ²¹

1. All youth need to develop salable skills and those understandings and attitudes that make the worker an intelligent and productive participant in economic life. To this end, most youth need supervised work experience as well as education in the skills and knowledge of their occupations.
2. All youth need to maintain and develop good health and physical fitness.
3. All youth need to understand the rights and duties of a citizen of a democratic society and to be diligent and competent in the performance of their obligations as members of the community and citizens of the state and nation.
4. All youth need to understand the significance of the family for the individual and society and the conditions conducive to successful family life.
5. All youth need to know how to purchase and use goods and services intelligently, understanding both the values received by the consumer and the economic consequences of their acts.
6. All youth need to understand the methods of science, the influence of science on human life, and the main scientific facts concerning the nature of the world and of man.
7. All youth need opportunities to develop their capacities to appreciate beauty in literature, art, music, and nature.
8. All youth need to be able to use their leisure time well and to budget it wisely, balancing activities that yield satisfaction to the individual with those which are socially useful.
9. All youth need to develop respect for other persons, to grow in their insights into ethical values and principles, and to be able to live and work cooperatively with others.
10. All youth need to grow in their ability to think rationally, to express their thoughts clearly, and to read and listen with understanding.

²¹ The Imperative Needs of Youth, *Bulletin of the National Association of Secondary School Principals of the National Education Association*, 31 (March, 1947), p. 2. The entire bulletin is devoted to a discussion of these needs.

In addition to these needs, seven factors common to all youth were presented by the Educational Policies Commission.²² These are:

1. All American youth are citizens now and all, or nearly all, will be qualified voters in the future; all require education for civic responsibility and competence.
2. All, or nearly all, youth are members of families now or will be in the future; all require an understanding of family relationships.
3. All American youth are living in the American culture, and all, or nearly all, will continue to do so; all require an understanding of the main elements of that culture.
4. All need to maintain their mental and physical health; all need instruction to develop habits of healthful living, ways of preventing disease, avoiding injury, and using medical services.
5. All American youth will be expected to engage in useful work; all therefore require occupational guidance and training.
6. All American youth have the capacity to think rationally; all need to develop this capacity and, with it, an appreciation of the significance of truth as arrived at by the rational process.
7. All American youth must make decisions and take actions which involve choices of values; all therefore need insight into ethical values and to grow in an understanding that the individual is of surpassing worth.

Although these needs, which are common to all youth, should be given primary consideration in curriculum planning, there are many others of an individual or group nature which should be considered. The solutions to the problems which were mentioned become real needs for them; interests and curiosities, whether they are practical or not, constitute needs. In addition, they need the services of the school as the guidance agency to help them select goals and a lifework, to learn their own limitations and capacities, to select appropriate courses, and in some cases to choose a school to attend after finishing high school. They need health services in order to discover physical defects and have them corrected. They need a good school library where they can read further about their special interests, get material on their hobbies, find answers to their many questions and solutions to their problems. They need an outlet for their emotions and energy in

²² "Education for All American Youth," pp. 16-17, Educational Policies Commission, National Education Association, Washington, D.C., 1944.

the form of dramatic, literary, artistic, and athletic activities. They need the friendships and associations of other pupils and an opportunity to enjoy them in the social program of the school.

MENTAL HYGIENE

High school students are familiar with physical hygiene. They have learned the need for proper food, sleep, rest, exercise, and bodily cleanliness. Mental hygiene, in many respects, is similar, but it is concerned with the mental or psychological aspects of pupils, such as mental ability, emotional reactions, personality traits, character and moral development, and attitudes. Since these are not visible as are physical traits, they must be studied by actions or the behavior patterns of pupils.

To a great extent the adolescent's conduct is conditioned by his mental attitude, which may be defined as his pattern of thinking. Whether or not he possesses such traits as honesty and trustworthiness or has a respect for the property and rights of others and for the opposite sex will depend upon his point of view. Actions are outward expressions of thoughts and emotions, and the only way one can detect mental activity is through physical responses or behavior patterns. Furthermore, one responds to a situation or has a certain reaction because of his attitudes. Therefore, if an adolescent is to be taught to guide and direct his own conduct in a wholesome and normal manner, if he is to become well adjusted, his attitudes must be studied as the controlling factor. Aiding pupils to be better adjusted to their environments and to be better able to control their own conduct is a major problem and major purpose of mental hygiene.

To accomplish this goal, the entire school must cooperate. All must work to plan a school program which constitutes an environment which produces wholesome personalities and well-adjusted pupils. This will require a study of the causes and effects of abnormal growth, of the factors in the school environment which need to be modified, and of those which may be utilized as they are in producing normal psychosocial development.

Causes of maladjustment. An adolescent is constantly being confronted with problems which require his selecting some course of action. If the pupil is incapable of making correct decisions for him-

self or avoids making decisions, he may become maladjusted. It is possible that one may be better adjusted in some respects than in others. For example, one may be well adjusted to his curriculum, but not adjusted socially. The typical high-school environment contains many factors which often cause pupils to have conflicts, to be emotionally disturbed, to retire from realities, to daydream too much, to engage in immoral practices and dishonest activities, or to substitute goals for those they cannot attain or retreat from hard problem solving. The problems themselves do not always cause an adjustment problem directly, for the total school environment includes the friends the pupils make, the leisure reading they do, and other factors. The causes may also be outside influences which are carried into the school or are evidenced in it, such as those caused by trouble in the homes or lack of self-confidence developed in homes where independence is not promoted.

Often maladjustment arises from attempts to attain goals beyond one's ability or lack of motivation to attain them. This results in substitute goals. Dissatisfactions often lead to maladjustment, such as those resulting in failures to achieve certain goals. Some of those frequently noted are failure to:

1. Make certain marks.
2. Be invited to join certain organizations.
3. Qualify for a place on the team or choral club, or to get a part in a school play.
4. Be elected to some office.
5. Achieve the popularity desired.
6. Win in some contest: athletic, literary, or musical.

Lack of motivation may be the result of dislikes of something which, if not compensated for or overcome, may be transferred to further dislikes. For example, pupils may develop a dislike for a teacher because of punishment considered too severe. If not overcome, this may result in a dislike for the subjects taught by the teacher and spread to other subjects and teachers, and even to a dislike for the entire school. Many have left school for reasons which originated in this manner.

Maladjustment and frustration. The effects of maladjustment are usually shown by various types of activities. Pupils may become re-

tiring, passive, listless and lose interest in school activities, or they may become too active and boisterous and become disciplinary cases. Understanding the psychological causes which result in abnormal activities is necessary for their correction.

Those youths who are able to achieve satisfaction in meeting their needs are happy and adjusted. Those who cannot attain desired goals which will bring satisfaction, and who are ineffective in their efforts to achieve, often become frustrated. There are many causes, such as the failure to achieve, the feeling of being rejected, and the feeling that they are personally unattractive, which prevent children from having confidence in themselves.

All pupils are frustrated from time to time, for frustrating situations cannot be wholly avoided. In general, all behavior which does not follow the principles of motivation results in maladjustment and undesirable reactions to frustration. Some of the reactions which should be understood and which may result in maladjustment are:

Aggressive Behavior. Aggressive behavior is that type in which emotion rather than reason controls an action so that it is not directed toward goals unless it is done so accidentally. It does relieve tension and should be directed so that it will be harmless to others.

Withdrawal and Fixation. Withdrawal from the activity being carried on or withdrawal from reality is another type of reaction. This eliminates any chance of reaching the goal, for there is a lessened activity, and it is not at the level of the goal. Fixation is fixed behavior and is a response to frustration by acts which have been repeated over and over without variation. Both originated in behavior which represented the solution to some problem in the past and are repeated even though results are not satisfactory. Fixed behavior results in problem solving only when the problem corresponds to the activity. In true problem solving, behavior must be modified to suit the particular situation.²⁸

DENIAL. One form of withdrawing is that of simple denial. It is an easy course to follow, for it consists in denying that certain facts exist or in ignoring the existence of certain situations. It comes from habits of early childhood in which one makes believe that something does not exist. It is also a matter of ignoring certain things which might be

²⁸ D. Segel, *op. cit.*, pp. 24-28.

annoying or distasteful. Groups as well as individuals may ignore certain elements in their environments. The following are other forms of denial:

Repression. When there is a response to an inner conflict or there are forces within which are active, but which the individual wishes to ignore, the result is that of repression. Practically all pupils have feelings of conceit, jealousy, rivalry, envy, at some time or other. If they do not want these traits to manifest themselves, they repress them, or attempt to do so. Repression is similar to suppression, in which one deliberately suppresses his feelings, such as anger, pity, or remorse, while viewing a sad scene in a motion picture. Normal pupils will solve their problems without becoming too emotional or creating emotional disturbances within themselves. Those who refuse to be aware of certain elements within their environments or of their own traits will either not solve their problems or will become emotional and disturbed in attempting to do so.

Rationalization. Rationalization is a process of avoiding a conflict by attempting to explain it away or by finding an alibi for unacceptable behavior. Rationalization is employed to convince oneself that something he wants is something he needs; to excuse himself for breaking a rule; to find a reason for not solving a difficult problem or for not studying a difficult lesson. Often one will excuse himself for committing a dishonest act by saying that others are dishonest or a cruel act by saying that he lives in a cruel world. If a student is not given an allowance which meets the needs of his group, he may try to cause himself to believe that this is sufficient justification to steal.

Projection. Projection is a mental or psychological device for assigning all difficulties and faults to others. It is a process of recognizing in others traits which are not liked in ourselves. For example, pupils may believe that every accident was the fault of another; that every fight or quarrel was started by someone else; that every failure to succeed or to achieve goals is the cause of the school system, the teachers, parents, or society. If some students fail to make friends readily or with certain persons, they may act on the assumption that they are not desirable companions in the first place and spurn any attempts on their part to be friendly.

Sometimes pupils try to cover up their feelings by acting opposite to the way they feel. They may have feelings of sadness and really

want to cry but will cover up the feelings by acting in an opposite manner; that is, they may laugh, "wisecrack," or become boisterous.

These behavior patterns are all normal and possessed to some extent by all persons. There is no harm in them unless they are carried to the extent that they result in mental ill-health. If teachers understand them and become acquainted with pupils sufficiently, they may be of real assistance in helping them make normal adjustments.²⁴

ESCAPE. In addition to the mechanisms of denial are those of escape. Since pupils cannot avoid certain activities, as being compelled to attend school, to get certain hard lessons, or to do many disagreeable things, they escape mentally.

The usual methods of escape are:

Intellectualization. Some pupils who are confronted with a difficult problem avoid it by theorizing about it or attempting to get into a discussion about it, but one not aimed directly at the solution. The theories and discussions are used to avoid action, rather than as a background for them. A wise teacher may make use of this tendency by letting the discussion become the background for action.

Regression. Regression is the act of returning to childhood in order to avoid decisions or activity on a mature level. It accounts for adolescents acting like mature persons at one time and like children at another time. The problem or occasion determines the manner in which they will act.

Developing physical ailments has been used by many pupils to avoid disagreeable tasks. They learned earlier that illness was a good excuse; so they pretend illness when they need to get out of some difficult task. Some pupils have carried this to such an excess that they really become ill when they wish to, as during examination periods.²⁵

Improving mental health. In any attempt to improve mental health, the first step is that of locating those who need help. This may be done through observation aided by formal mental-health analysis. The Mental Health Analysis by Thorpe and Clark²⁶ is designed to aid in obtaining a better understanding of the factors which condition mental health. The test is designed to measure 10 factors: behavioral imma-

²⁴ Fritz Redl and William W. Wattenberg, "Mental Hygiene in Teaching," pp. 51-58, Harcourt, Brace and Company, New York, 1951.

²⁵ *Ibid.*, pp. 58-64.

²⁶ Published by the California Test Bureau, Los Angeles, Calif.

turity, emotional instability, feelings of inadequacy, physical defects, nervous manifestations, close personal relationships, interpersonal skills, social participation, satisfying work and recreation, and adequate outlook and goals.

The second step is that of understanding the phases needing improvement and their nature. For example, one pupil's greatest difficulty may be "emotional instability." Knowing this, and determining the causes, should be followed by specific remedial activities. A physical examination may be necessary to determine whether or not physical defects are present. Perhaps rest periods are needed, or perhaps the student is engaging in too many activities or those of too strenuous a nature. He may be going to the opposite extreme, that of studying long hours when exercise and more social contacts are needed. No rules for overcoming these difficulties can be given; the ingenuity, study, and co-operation of all persons concerned in the development of youth are necessary to obtain improvements.

IMPLICATIONS FOR CURRICULUM PLANNING

From a study of the development, characteristics, needs, problems, interests, and causes of maladjustment of adolescents, several principles may be derived which will aid in planning curricula for them.

Adolescents have characteristics peculiar to youth. *Adolescents are not miniature adults.* An understanding of them and their problems is basic to guiding their growth and development.

Each adolescent should be treated as an individual. Although there are characteristics common to all youth, generalizations should be used sparingly in working with individuals. For example, adolescent interests and needs differ to such an extent that generalizations are of little value. Interests should be determined for each pupil and used in directing activities, in guidance and motivation, and in planning a curriculum of experiences broad enough to meet the interests and needs of all. The interests of each pupil should be studied rather than assumed.

All activities should be selected with a knowledge of the maturation level or the stage of growth of the pupils. If each activity and all subject matter are selected with a knowledge of the maturity of the pupils, they will find a greater need for them and be more interested and their learning will be more permanent. It has been shown that

activities too far in advance of the maturity of pupils are very ineffective in producing permanent results.

The school curriculum should be broad enough to meet the needs and interests of all. If a pupil is pursuing a curriculum or a course of study which is not congruous with his interests, needs, and capacities, his reaction may be one of submission to the inevitable or open rebellion. He may seek "escape," that is, seek satisfaction in other forms of activity. If his maladjustment results in failure, he may become discouraged or get an inferior feeling. All pupils should be aided in selecting courses and given an opportunity to explore; and transfer from course to course, or curriculum to curriculum, should be made easy. Likewise, individual curricula should be made flexible, so that if a pupil finds he is out of place, he can change to another.

A program of co-curricular activities should be provided. One of the guiding principles of an activity program is that all pupils should participate in activities, but none should be required. Such a variety of activities should be offered that every pupil will engage in them on his own initiative. One of the great values of activities is in training in leisure-time pursuits. Those which have the greatest carry-over value are to be preferred, for school life occupies only a part of one's total hours. Sportsmanship and character can be developed through intra-mural contests, games, and sports. Interschool contests should be avoided, for they place too much emphasis upon winning and not enough on participation.

Each pupil's strengths should be known and opportunities provided for him to engage in activities employing them. Many pupils are mal-adjusted because they have not excelled or made a high achievement in anything. There is something each can be successful in, and this should be found. The pupil should then be directed into this activity.

Leisure reading opportunities should be provided. Improper habits of thinking, as daydreaming, thoughts of revenge, and those pertaining to sex, can best be directed by diverting them into more worthy channels through leisure-type reading. The school library should abound in books on adventure and travel and magazines devoted to mechanics, science, photography, handicrafts, and current events. All pupils should have free reading periods in libraries with open shelves and should be encouraged to use the library for reading and browsing. The best qualities of heroes of literature will furnish models for adoles-

cents to emulate, and if one has made a poor selection of a hero to worship, he should be given another more worthy.

Sex education should be provided. One of the most important but most neglected phases of the training of adolescents is that of sex education. A majority of the problems of adolescents, as revealed by the questions they asked, pertain to relationships between the sexes. The neglect has been due not to failure to recognize the need but to two chief factors: (1) false modesty, or a reluctance to discuss sex problems openly, and (2) deficient knowledge of the proper techniques of teaching sex relationships. Some instruction has been given in biology classes with excellent results, but the social side, which is more important and harder to teach, is just beginning to find a place in secondary-school curricula.

There is a difference between moral and sex knowledge and moral practices. Sex instruction, though needed to impart knowledge, is mainly needed to develop healthy attitudes. Sex knowledge can be gained incidentally through companions, experience, and cheap literature, but it is often gained in vulgar terms which leave the impression that all sex relations are related to secret vices or that it is something unclean which should never be referred to in polite society. If the instruction is given in school, proper terms will be learned, wholesome attitudes developed, and the very process of making the subject an open topic of discussion will dispel many false attitudes.

Activities or subject matter which might result in religious conflicts should not be introduced. Religious conflicts are usually caused by out-of-school influences, but the child may show evidence of emotional disturbance in school. Usually the religious problems of adolescents cannot be directly met in school. If a teacher finds an adolescent who has religious problems, she can give help by making it an individual case and by conferring with the pupil's parents or pastor, who, in turn, may help.

The guidance program should be improved and expanded to reach all pupils. Many pupils are not motivated because they are in the wrong courses, or are in the wrong sections of courses, or are unable to get along with certain teachers. If changes can be made and they can be directed into channels where they can and will work, they will be happier. Often pupils are attempting activities which are beyond their capacities or which fail to challenge because they are unable to

have the success they desire. Such pupils should be guided into other types of activities or courses.

Contests should be reduced as much as possible or eliminated. Many frustrations result in students' attempting to win in certain contests and not being able to do so. In all contests, someone must lose. Activities of a musical and a literary nature, especially, should be enjoyed, not contested. In athletics, contests should be arranged so that all will have an equal chance of winning.

The school should become more democratic. Practices such as setting up closed organizations in which members select other members are not democratic. Clubs should be open to all who are interested and meet the requirements of membership. If they are voted in, the procedure may become a popularity contest between those who wish to join. School parties and social activities should be controlled by the school so that they will not become exclusive or of such a nature that many will feel unwelcome or out of place because of the clothes they wear or the social graces they have not acquired. The point system of regulating participation in activities should be practiced so that a few pupils will not be elected to all offices and many others will never be given a chance to participate. School programs should be of such a nature that as many students as possible may take an active part.

Only those teachers who understand adolescents and are temperamentally constituted to work with them should be employed in secondary schools. Teachers who do not meet this requirement will consider many of the normal activities of youth as annoying. They may become unduly irritated and angry simply because they do not understand children or because they themselves are not well-adjusted people. Experienced school administrators state that "problem children" are often the products of "problem teachers."

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TRENDS IN ORGANIZING AND REORGANIZING SECONDARY-SCHOOL CURRICULA

Perhaps the greatest lesson to be derived from the study of the history of secondary education and comparative education is the fact that any school which failed to be progressive died. Examples of these are found in the secondary schools of the Greeks and Romans, the Latin grammar school, and the academy. These schools did not change with a change in society, which resulted in their being divorced from life. Each was replaced by a more progressive school. The high school, founded on a new philosophy and built upon the best of its two predecessors, was in danger a few decades ago of losing its prestige, for it was rapidly degenerating into a college-preparatory school rather than changing its curriculum to meet the needs of pupils with many interests and vocational intentions who were filling the school.

Curriculum planning should be a continuous process. Teachers, parents, and pupils should always be engaged in planning new courses, combining and integrating existing ones, dropping those which no longer meet pupils' needs, and, most important, revising the content of each course retained. This involves not only the selection of new and appropriate materials but also the organization of the materials into teaching units. More is done in this latter phase than in any other phase of curriculum revision and planning. Courses may keep the same titles, such as Biology, Problems of Democracy, or English III for many years, but the content and organization will, or should, constantly change.

On what basis should curriculum revision proceed? If dynamic curricula based upon the responsibilities of the high school to society, and

a recognition that it is a participating agency in the solution of community problems, are to be planned, then revision should parallel changes in contemporary life. It becomes necessary then to determine what these changes are.

The present chapter will present a number of changes in modern society, followed by a description of a few outstanding examples of secondary-school curricula which have been reorganized in the light of these changes.

CAUSAL FACTORS FOR CURRICULUM REVISION

The reexamination of the aims, functions, and goals of secondary education, the extent to which they have been achieved, and a reorganization of the curriculum in the light of this examination should be a continuous process. Although general or ultimate aims might remain constant from one generation to the next, the specific aims and immediate outcomes must be changed to keep pace with a changing social order. The demand for a changing curriculum has become articulate, as indicated by the extent to which certain school subjects of a formal nature, such as algebra, geometry, physics, and Latin, are losing popularity. Parents are demanding that their children receive more than a literary education and that the schools accept the responsibility for many current problems of society.

The secondary school was established by society as a social institution intended to help man secure his basic needs. Other institutions—social, economic, spiritual, and political—were established at the same time. One function of the secondary school is to give youth a better understanding and appreciation of these institutions and help perpetuate them. A still more progressive point of view is not only that the school is to help perpetuate the most desirable institutions and culture of the past and present but that it should go further and be the center for building civilization. Regardless of which point of view one holds, each one requires that the secondary school engage in a constant curriculum reorganization: the one to acquaint youth with present-day society, and the other to prepare them to change present-day society. If curriculum reorganization and revision are to parallel changes in society, then a knowledge of these changes is essential.

CRITICISMS OF THE PRESENT CURRICULUM

Although criticism of the present curriculum cannot be used as a basis for constructing new curricula, it does present one cause for reorganizing. The following criticisms have, in part at least, a basis of genuine merit:

1. The curriculum is too remote from the students' daily life outside the school. Schools do not give enough consideration to the everyday living of the pupils. Too frequently the school maintains an academic atmosphere so remote from actual life that students can see no connection between it, the home, and the community. The schools also fail to articulate other agencies which are serving youth.
2. The curriculum is not sufficiently adjusted to modern life. Too many phases of courses of study are unrelated to the lives pupils live. The problems given them to solve in school are not the same as those they encounter in their daily lives. They are asked to write on subjects which are impractical and to engage in activities which have little or no carry-over value.
3. The curriculum does not reflect the ambitions, drives, and interests of pupils. It often ignores the most urgent desires of youth save those of the more academically minded students.
4. The curriculum is not sufficiently adapted to the individual differences of the pupils. Pupils are often treated as groups, as the college-preparatory group or the vocational group, rather than as individuals, and no provisions are made to meet the needs and interests of all youth.
5. The curriculum has not kept pace with the latest developments in psychology and education. Through the medium of research, the most desirable practices are determined and evaluated, but educational practice lags far behind the discovery of new truths. For example, it is doubtful that the chief psychological theories on which the traditional curriculum was based can be used to justify the existence of courses of little worth in and of themselves. No longer can the average child be expected to apply the facts taught in the classroom to life situations without assistance, for transfer does not take place automatically by the miraculous process of studying something hard, uninteresting, and unrelated to life.
6. The present curriculum gives too little attention to emotional and social attitudes and to mental hygiene. In many cases, these play a more important part in the development of youth than do their intellectual interests and vocational intentions.
7. The traditional curriculum has failed to produce integration. Life-

adjustment problems do not come in little subject-matter packages. It would be almost an impossibility for one to find a problem involving one subject only for its solution. If pupils are to be taught to solve problems which are worthwhile to them and are to develop integrated personalities, it cannot be done by dividing the phases into small parts, isolating and presenting them at different times and places, and expecting pupils to reassemble the phases for use when needed. Pupils' ability to do this would involve a great ability to transfer materials learned in one situation to another and also to organize the materials for use.

8. Schools have not placed enough emphasis on the development of moral and spiritual values. This does not mean that religion should be taught directly, although some advocate it, but that indirectly, through the medium of the entire school program, greater emphasis should be placed on developing higher values, better attitudes, and moral character.

9. Citizenship has not been stressed or taught properly. This means, not that it has not been accepted as an abstraction, but rather that it has not been taught so that the development of appropriate attitudes and skills which will be practiced is the ultimate aim. The same criticism has been voiced about the teaching of democracy.

These criticisms are typical of those which are heard from parents, teachers, and educators. In most of them, there is no suggestion that the schools are neglecting the teaching of desired outcomes. The criticism is that the methods employed are not producing the desired results. These are the criticisms not of those who are opposed to public schools in principle but of those who are concerned about their improvement. Such criticism should be welcomed; we should not try to defend the present curriculum, but we should try to improve it.

Forces demanding curriculum revision. Those who have voiced these and other criticisms of the secondary schools may be considered as forces demanding changes—forces which cannot be ignored. The taxpayers are objecting because claims made by educators have not materialized. Educators are demanding elimination of some of the "deadwood" in the curriculum, and they are calling for subject matter with more social utility. Definitions of art and culture have changed. Culture no longer means a smattering of arts and social graces with no practical value. Even democracy itself has been challenged, while some claim that universal secondary education is a doubtful practice and not worth the burden on the taxpayer. The First and Second World Wars and their aftermath revealed how fit or unfit we were

with respect to health, literacy, and vocational efficiency, as well as socially and morally. Various pressure groups are demanding reforms or additions such as the teaching of prohibition, religion, ideals of democracy, and conservation, while in other quarters there is open opposition to the high school.

These influences should not cause educators to become unduly alarmed about the future of the high school but should be interpreted to mean that notice is being served that, if reforms and reorganization do not keep pace with a changing social order, the school will either lose popularity or be replaced by a more progressive institution. Curriculum makers—and this term includes all teachers—can never rest long on the past reputation of certain subjects, for when the value of certain subjects is challenged, if they are not serving a definite social need their popularity will wane.

Douglass, in commenting on the present state of the curriculum in its relation to society, states: "If an archeological expedition some 500 years hence should unearth one of our courses of study and draw conclusions on schools about them, they would be convinced that schools were intent upon bringing pupils to maturity in complete ignorance of the social, economic, and political world."¹

In the next sections, a brief description of the changes which are taking place in our society and which should be accompanied by changes in secondary-school curricula is presented.

INSTITUTIONAL CHANGES

Changes in the home. Of the three main social institutions—the home, Church, and school—the first is the oldest and most firmly established. It is regarded as the fundamental social institution. Although traditionally conservative, it is undergoing many changes which have direct implications for curriculum revision. Many home functions such as cooking, sewing, and laundering, are now being industrialized, and other family responsibilities are now being taken over by community agencies. The home was once the seat of entertainments and amusements, where youth spent most of their leisure time, while now commercialized amusements have removed many of them. Formerly there

¹ Harl R. Douglass, *Can We Re-vamp the High-school Curriculum to Fit the Needs of To-day?* *Baltimore Bulletin of Education*, 14 (October, 1936), pp. 49-57.

were many chores to be done by children, but with modern conveniences, migration to urban centers, and apartment-house homes without lawns or gardens many of these tasks have disappeared. A few decades ago, the father was the undisputed head of the household; now it is a cooperative enterprise with the wife holding the pocket-book, for estimates indicate that the wife spends about 85 per cent of the family budget. Divorces are more easily secured and are not frowned upon as they were, while there is greater independence among the members of the family.

Changes are taking place in the methods of housekeeping. Electrical appliances and machines designed to take the drudgery out of house-work are rapidly increasing in number and are finding a place in more homes. Pupils need to learn how to operate them and to make minor repairs when needed. These skills are different from those employed in homes which do not have such household appliances. Rural areas are rapidly becoming electrified, and the way of doing things on the farm as well as in the homes is rapidly changing.

One of the effects of the war was the large number of early marriages, resulting in an increased birth rate and the necessity of establishing new home units. The latter helped cause a housing shortage, resulting in crowded conditions and the use of trailers, hutments, and even tents. During the war period there were many "war" or "factory orphans," so called because all adults in the family were working or in service, leaving youth to shift for themselves. Many children reached the ages of six to eight without having much parental association.

Changes in the Church. The Church is no longer the undisputed social center of rural communities, and it certainly is not the social center of urban areas. Although church attendance has increased, the percentage of persons attending church has decreased. Other organizations are taking the place of the Church for many people, while the television, radio, cinema, and automobile are diverting some persons from church attendance. The Sunday school, formerly the primary institution for training in ethical character, is no longer able to influence youth as it formerly did. It is a disputed question as to whether the Church should remain conservative and fundamental in its views or become more liberal and try to regain lost influence.

Changes in the school. Changes in the secondary-school population have been mentioned previously; that is, as the population increased, it brought in a more heterogeneous group with diversified needs, interests, and abilities. The single college-preparatory curriculum cannot hope to meet the needs of the millions who now attend high school. The number of high-school graduates attending college is increasing, but the percentage is decreasing.

SOCIAL AND ECONOMIC CHANGES

The twentieth century has rightfully been called the "machine age" or the "age of electricity." Technology has advanced more rapidly than sociology. Modes of living, thinking, and doing have changed because of machines, but social control has not kept pace with the numerous mechanical devices to save time and labor.

Ease of mobility. With respect to the school, facility in transportation has aided the consolidation movement and has produced many problems by creating a shifting population. School officials find it difficult, especially in industrial centers, to anticipate building needs. Constant shifts to pursue seasonal employment have resulted in an overlapping of schoolwork in some cases and omissions in others, while still others avoid attending school at all. The problem of safety on the highways was not important early in the century, but, with the mounting number of accidents and deaths due to automobiles, educators have accepted the challenge of educating youth to take its place at the wheel. Highways and automobiles developed more rapidly than drivers could be trained. Technicians and engineers are making roads and cars safe; schools are called upon to remove the human factor as a cause of accidents.

Urbanization. Since 1900, there has been a decided shift in population from rural to urban centers. This change accompanied the change in farming practices from horse- and manpower to tractors, trucks, and other machinery. In addition to this permanent shift from rural to urban centers, there are seasonal changes associated with periods of economic prosperity which cause an uncertainty as to where youth will be residing during the next decade. Some school problems associated with these changes are the following: an overcrowded urban

school; provision for leisure hours formerly occupied by chores on the farm; problems of health and sanitation due to the fact that rural people had to learn that certain modes of living which were satisfactory in rural areas were not healthful if practiced where persons lived too close together; and increased problems of vocational guidance.

Commercialized amusements. Americans have been criticized as being unable to entertain themselves and being dependent upon commercialized amusements. Motion pictures, dance halls, and amusement parks are well supported. The machine age has given increased leisure hours—hours which youth must learn to spend profitably.

Technological and economic changes. The rapidity with which articles are manufactured has introduced a division of labor, producing thousands of occupations and requiring millions of workers. Machines now do 85 per cent of man's work compared with 6 per cent in 1853.² This has produced a shift in employment and a need for new skills and caused many occupations either to go out of existence or to be greatly reduced. Industry is asking for more vocational training in high schools in order to shorten the period of preparation in service and also to reduce the number of misfits.

Mass production has necessitated pressure salesmanship in order to distribute manufactured goods. Many times, the methods used are not entirely ethical, and undue advantage has been taken of the consumer. Through advertising, attempts are made to cause the consumer to purchase what he does not need, more than he needs, and goods of a higher quality than he needs and to change models or styles more often than is necessary. Although several publications are available to guide the consumer, instruction is needed in schools to train in economic intelligence.

Consumer education is not limited to purchasing but comprises actually consuming and conserving, especially fuels, as electricity, natural or artificial gas, and coal. Instruction in this involves a knowledge of and skill in the operation of electrical appliances, gas and electric ranges, burners, and coal furnaces. The elements of economy, efficiency, and safety are all involved in the proper consumption of utilities.

Conservation. America is rich in natural resources such as coal, oil, gas, lumber, minerals, and fertile soil, but through misuse, waste,

² *Vitalizing Secondary Education, U.S. Office of Education Bulletin 3, 1951, p. 7.*

erosion, floods, fires, and rapid use this natural wealth is being depleted more rapidly than it is being replaced, and some is apparently being completely exhausted. If education is defined as a "debt due the future from the present generation," then the same attitude would require that the present leave as many natural resources to the future as they consumed or devise ways of harnessing energy not now being used. The problem of soil erosion, flood control, forest fires, and depleted forests is with the present and every generation. In an attempt to solve the problems, or at least to make children aware and conscious of them, we have introduced materials about conservation into our schools.

Poverty, crime, and unemployment. A reiteration of the conditions in the United States with reference to poverty, unemployment, and crime is not necessary. Certainly there is a cause and cure for all three, and all are somewhat related, in that unemployment causes poverty and often leads to crime. The extent of criminal activities has been a national scandal for years, and unemployment to some extent is always a problem. The problems are evident and numerous, but just what the school can do about them is not definite. If unemployment is a result of a lack of vocational training, as some claim, the school's task would be clear; but, regardless of one's training, positions must be available, and schools cannot create positions. If they are available and if industry and the business world are in need of man power, positions will be filled, whether with trained or untrained persons. Those who are trained will, of course, be given preference. It is only recently that the schools have attempted to train youth for general vocations, and certainly there are more trained youth now than before this was done. Vocational training makes its greatest contribution in adjusting youth to the vocational world, rather than by giving them specific training in the types of work they could or might pursue. The school can never create wealth or positions.

The high schools can and do give instruction in moral conduct, good citizenship, and ethical character, intended to reduce the amount of crime. Likewise training in leisure-hour pursuits helps prevent criminal activities, but regardless of the school's attempts in this respect, if the home and community environment of each individual does not promote the same type of growth, the school's attempts will be ineffective. Society cannot dispose of her social and economic problems merely by referring them to the school and expecting immediate

and desirable improvements. The school is only one agency affecting the lives of the children, and unless there is complete cooperation between others and the school so that all work toward the same goals, advancement will be slow.

Prohibition. Perhaps the best single example of the lack of cooperation between the school and other educational agencies is to be found in the public's, the school's, and the Church's attitude toward intoxicating liquors and tobacco. The attitude of some churches is that of prohibition; the school's, that of moderation and temperance. While these two work toward the same goal, the motion pictures, newspapers and magazines, and public and social activities are opposed by both action and statements to both Church and school. Advertisements encourage smoking and drinking; the average cinema is at least tolerant of drinking, and with the exception of ministers and teachers, and possibly a few others, there is no social stigma attached to smoking and little to drinking.

Small wonder attempts to teach the evils of these practices to adolescents are not taken seriously. Few if any schools are attempting the former methods of teaching prohibition by trying to create an attitude of fear; most confine their work to known and established facts and make their appeal to respect for others and a desire to be more efficient.

Immigration. Notwithstanding the fact that the number of immigrants to the United States has been reduced in recent years, the number is still sufficient to warrant special efforts to integrate and democratize them. Their immediate needs are a knowledge of our modes, customs, laws, and language. From the standpoint of national solidarity, we should inculcate in them ideals of democracy. The secondary school is an excellent institution for this work.

CHANGES IN EDUCATIONAL THEORIES AND PRACTICES

The greatest changes which have taken place in educational theories and practices have been those contributed by educational psychologists. The directing of learning and efficient methods of studying are based upon psychological principles, and newer findings have placed grave suspicion and doubt upon many former practices.

Transfer of training. The older explanations of transfer of training were the now discredited formal discipline and faculty theories, which denied the doctrine of interest, believing that if one were interested in a subject it resulted in soft pedagogy and the subject would have no value. Since these theories have been discredited, subjects placed in the curriculum with no values other than formal discipline are losing in popularity.

Interest and social utility. Recently, greater value is being placed on interest and social utility. Those subjects which have the greatest appeal to pupils, are more congruous with their abilities and needs, and have the greatest social utility are given preference. Interest is a strong and lasting drive, and if there is such a thing as formal discipline, being interested in a subject will not prevent its operation. Likewise, the fact that a subject has great social value would not prevent "mind training," if there is such a process.

Integration. Transfer of training from a school to a life situation, or from one subject to another, proceeds more rapidly if it is taught. This is facilitated if all similar responses to a unit situation are placed together in the same course of study and taught either in close succession or at the same time. The division and organization of subject matter into the usual or conventional subjects, such as science, mathematics, English, history, and art, do not bring all related materials together, and thus relationships are clouded. Recently, much subject matter has been organized on a unit basis cutting across various divisions; or two or more courses are being fused, as science and mathematics, history and geography; or teachers are correlating subjects, that is, pointing out relationships between them. Methods of organizing curricular materials on these bases will be discussed later in this chapter.

Shift in emphasis on certain aims. Although general aims remain constant, means of achieving them and relative emphasis on different ones will change with a changing society. A few specific examples will illustrate this point. Ethical character and moral conduct have been either an implied or a stated aim of secondary education for generations, but the method of teaching them has changed from a more or less direct method of moral lectures and didactic stories to an indirect method of wholesome activities and literature.

Citizenship, an aim of all secondary schools of all countries, may be taught in many ways and through the medium of many subjects. Citizenship training is always conditioned by the type of citizen one wishes to train. A social-studies course consisting of political history and civil government has been replaced by a greatly changed social-studies curriculum. A mere knowledge of laws and historical facts, flag saluting, and oath-of-allegiance pledging will not produce good citizens. Furthermore, democracy must be lived and practiced. It cannot be taught directly.

Examples of a shift in emphasis on certain aims may be seen in the worthy use of leisure time and vocational efficiency. The increased amount of leisure gained by a shorter working day introduced the problem of providing worthwhile activities during these hours, so that leisure time would not be more detrimental than beneficial to the individual and to society as well. Vocationally, the school must modify its curriculum to give more vocational training, more exploration and guidance, and more skills, knowledge, and attitudes basic to a number of general vocations. This need has been accentuated by the increased number of vocations, the number of vocational misfits, and the changing industrial world. If one has only specific rather than general training, if there are no opportunities in his specific field owing to seasonal slacks or a replacement of his vocation, he will need the ability to adjust himself to a new type of work.

IMPLICATIONS FOR CURRICULUM REORGANIZATION

In the light of the many changes taking place in social and economic institutions and in educational practices and theories, the following may be suggested for curriculum revision:

1. Many things formerly taught in the home, such as cooking, sewing, and purchasing, must be taught in the school.
2. Ethical character, formerly adequately cared for by the Church and home, should be emphasized more in the school.
3. The single or college-preparatory curriculum will no longer meet the needs of all those attending the secondary school.
4. Many new topics or subjects such as consumer education, safety, and conservation should be introduced in the curriculum.

5. Vocational courses for exploration and vocational efficiency should be introduced in secondary schools, especially for those who in all probability will not continue their work in higher institutions.

6. Greater emphasis should be placed upon developing the aims of worthy home membership and leisure-time activities. Not only should the school train youth to spend their leisure time more profitably, but it should aid them in selecting the books and magazines they read, the motion pictures they see, and the radio and television programs they hear and see.

7. Curriculum organization should proceed on the principles of reducing the number of subjects being offered and combining many subjects around broad general units.

8. Subjects which have few values other than those of formal discipline and college preparation should be pure electives and offered only in the eleventh and twelfth grades.

9. Subject matter should be selected in keeping with the needs, abilities, and interests of youth with due consideration of social and economic utility and present as well as future needs.

These suggestions are based on the assumptions that:

1. The school should be made to fit the pupil.
2. The school is an instrument of society, but
3. The welfare, efficiency, and happiness of each individual should be considered.
4. The school should teach those desirable activities the pupil will or should engage in, and that
5. If these things are not being adequately cared for incidentally or by some other agency, and they are for the welfare of society, it is the responsibility of the school to teach them.

TRENDS IN CURRICULUM REORGANIZATION

In the light of the various factors calling for a revision of the curriculum, educators are examining the traditional methods of organizing and presenting curricular materials. They want to know whether or not youth are learning to solve their social, personal, and economic problems and whether they understand life as a whole. An evaluation of the content of the traditional curriculum resulted in the conclusion that it is not meeting the needs of present-day society; an examination of the organization of the content and the methods of presenting

the content is revealing that they, too, need revision if the school is to achieve what is expected of it.

Since about 1930, there has been increased interest in curriculum revision and curriculum development in all parts of the United States. Not only have cities been engaged in such enterprises, but several states have initiated state-wide programs.

Most of these curriculum-revision programs show certain similarities and trends:

1. There has been a break from the traditional curriculum both in content and organization of activities.
2. Teachers are taking a more active part in the program. It is now recognized that, if curriculum revision is to be more than "paper" revision by experts, the classroom teacher must be in sympathy with, have an understanding of, and take an active part in the enterprise.
3. A mechanistic conception of learning involving the breaking down of general into specific objectives, which are given grade placement and taught in an additive fashion, has been replaced by considering general aims as wholes which function at all levels.
4. There is a definite trend to integrate the curriculum through co-operative or unifying methods. Subject-matter divisions are being abandoned to some extent.
5. The textbook is being supplemented with many books and pamphlets used as references.
6. Subjects, especially "tool" subjects, are no longer being taught as ends in themselves but as a means to gaining understandings, appreciations, and attitudes.
7. The primary focus of the curriculum is being shifted from the past to the present and future.
8. Minimum essentials are now including the development of attitudes, appreciations, and generalizations desirable for an understanding of the important institutions and problems of everyday life.
9. There is a trend to include controversial issues in the curriculum or to consider those problems for which there is no authoritative answer.
10. Creative expression, pupil initiative, and rational freedom are being introduced as contrasted with teacher-dominated situations in which pupils followed set patterns and initiative was discouraged.
11. Guidance programs are being made an inseparable part of the regular teaching process.
12. Extracurricular activities are being made a part of and are being integrated in the curriculum rather than being treated as something extra.

The close agreement among various curricula which have recently been reorganized represents agreements in trends and curriculum thinking rather than a uniformity in practice.

Life-adjustment education. It seems to be a difficult matter for educators to determine and provide for the needs of all youth, even though they have accepted the need to do so as a principle. No sooner, however, are the needs of a number of pupils neglected than someone makes a plea for the "forgotten pupils." Their needs are stressed, and often magnified, in order to get action. As a result, they begin receiving the lion's share of attention, and another group gets neglected.

This situation is illustrated by the overemphasis given college-preparatory pupils in the past and the seeming neglect of those not going to college. After many pleas for reforms, vocational education was stressed for those not going to college. Since these two groups constitute about 40 per cent of the high-school enrollment, the remaining 60 per cent seemed to be neglected. Attention has now been directed to them, but efforts are being made not to overlook any pupils while doing so. Considering the needs of pupils by dividing them into groups is not a sound principle in the first place, for it is difficult to identify them when they enter high school.

Life-adjustment education was first proposed for the 60 per cent which was neither in the vocational nor in the college-preparatory group. Since then it has been considered equally valuable for all pupils, for all, regardless of their future activities with respect to schooling or vocational pursuits, need to be adjusted to, and to live in, their respective communities.

Helping pupils in their life-adjustment problems does not require a new group of subjects or an organization which has not been previously suggested, but it does involve the selection of learning activities involving vital problems in the present lives of youth. These should be the heart of the core curriculum.

The Commission for Life Adjustment Education agreed on the following characteristics of life-adjustment education:⁸

It is concerned with ethical and moral living and with physical, mental, and emotional health.

⁸ "Life Adjustment Education for Every Youth," p. 40, Federal Security Agency, U.S. Office of Education, Washington, D.C., 1948.

It recognizes the importance of fundamental skills in reading, writing, and arithmetic as well as the ability to listen, and to speak effectively.

It is concerned with the development of wholesome recreational interests of both an individual and social nature.

It is concerned with the present as well as future problems of youth.

It respects the dignity of work and recognizes the educational values of responsible work experience in the life of the community.

It provides both general and specialized education but, even in the former, some differentiation should be observed.

It has many patterns. Each school should determine the best method of meeting the goals in each community.

It emphasizes deferred as well as immediate values. Each individual is stimulated to maximum achievement according to his capacity.

It emphasizes active and creative achievements as well as adjustment to existing conditions; it places a high premium upon learning to make wise choices.

Above all, it recognizes the inherent dignity of the human personality.

At the present time, programs on a state level are in progress in an attempt to cause life-adjustment education to be stressed in every high school of the country. These programs are directed by state departments of education or by committees appointed by them. They are aided by reports and publications of the national Commission on Life Adjustment Education for Youth, composed of members of various departments of the National Education Association, with a steering committee from the U.S. Office of Education. Their first publication, *Vitalizing Secondary Education*,⁴ describes the movement and urges that the program be put into action.

METHODS OF INTEGRATING THE CURRICULUM

Methods of integrating the curriculum may be divided into three parts which are closely related: (1) those producing integration through a change in techniques and methods which do not involve the modification of subject-matter organization, (2) those involving the reorganization of the subject matter in a single course, and (3) those involving a reorganization of subject matter in two or more courses. The last two also require a change in the methods and tech-

⁴ *Vitalizing Secondary Education*, U.S. Office of Education Bulletin 3, 1951.

niques of teaching if the new organization of experiences is to be efficacious.

Integrating the curriculum by changing the techniques and methods of teaching. Securing integration by a change in techniques and retaining an organization by subjects may be achieved by *incidental* or *systematic correlations*. There are several degrees and types of these forms, which, in order of their degree of cooperation among teachers, are called "participation," "cooperation," "coordination," and "concentration." The first two are incidental; the latter two, more systematic.⁶

Participation or incidental correlation. To some extent, varying greatly with different teachers, incidental methods of correlating the curriculum have been practiced for years. Incidental correlation may be practiced in many ways:

1. When facts are presented, or skills taught, they should not be separated from the context of a unit or series of events. Facts are not ends in themselves, but aids to an understanding.
2. Relationships between one subject and another, one fact or event and another, whether in the same or other fields, should be pointed out. Experiences should be related to each other and the relationships made known rather than isolated.
3. Pupils should be encouraged to generalize. Studies have revealed that in many cases the inductive method, in which specific incidents are presented followed by generalizations by pupils, results in more transfer than the deductive, in which one starts with a general statement and then finds specific instances.⁸ This method consists in organizing and generalizing rather than routinizing in order that pupils may learn to utilize the products of learning.
4. Pupils should be encouraged to summarize. Summaries should bring together all the related experiences so that the pupil can see them as a whole. Summarizing is organizing.
5. Teachers should not hesitate to go out of their fields for subject matter to enrich their own courses.

⁶ See A. E. Cross and Elizabeth Carney, "Teaching English in High Schools," rev. ed., Chap. 3, The Macmillan Company, New York, 1950; and Edgar Bruce Wesley, "Teaching the Social Studies," 3d ed., Chap. 27, D. C. Heath and Company, Boston, 1950, for methods of integrating the content of the curriculum.

⁸ Robert W. Frederick, Clarence E. Ragsdale, and Rachel Salisbury, "Directing Learning," p. 119, Appleton-Century-Crofts, Inc., New York, 1938.

6. Facts and materials pupils are studying in one course should be related to other courses whenever possible.

The more each teacher keeps in contact with the work of all other teachers, the more one subject can be related to another. When all teachers work together, the form is called "cooperation."

Cooperation. In the cooperation method of integrating the curriculum, all teachers keep informed of what their pupils are experiencing at the time in other subjects so that each can relate her own work to that of others. This does not require any modification of subject organization, for the relationships made between subjects are made only when convenient or at opportune times. For illustration, several specific examples may be mentioned:

1. Papers written in science or social studies may be marked first for content, then turned over to the English teacher for their English; conversely, the English teachers may assign subject matter from other courses as topics for themes.

2. In debating and public speaking, subject matter from various fields may be used.

3. English teachers can teach pupils to read science, mathematics, history, and so on, as well as how to read poetry, drama, and novels.

4. History teachers can point out the relationships between scientific movements and events and social, political, and religious events. Likewise, science teachers can show how science has contributed to history.

5. In mathematics, the social background of materials involving quantitative aspects should be taught.

6. Mathematics teachers can teach those skills and concepts needed at the time in other subjects, such as science, economics, and home and industrial arts.

Coordination. The coordination method involves the reorganization of subject matter. A synonymous term is "parallel organization"; that is, as nearly as possible, all teachers are pursuing different phases of the same general material at the same time. This requires careful planning and is a systematic form of securing integration. Coordination can be accomplished much better if the content of each subject is first organized into units or topics, preferably the same scheme being selected about which to organize the materials of each subject. Examples of such topics or units are communication, transportation, and securing a food supply. Various phases of these units are presented

at the same time in different subjects. Since all subjects do not make equal contributions, to maintain an even front teachers may either study further into related materials or pursue other materials until all teachers are ready for a new unit.

Concentration. Like the coordination method, the concentration method requires a reorganization of materials within each subject. In this plan, some subject such as the social studies is selected to become the core, or nucleus, of the entire curriculum. In this manner, everything taught in any course, being related to the one course, becomes related to everything else being taught. The social studies furnish the best concentrating subject, for the majority of other subjects have a social background, have economic importance or implications, are socially useful, and have historical development.

Integration secured by transcending subject-matter divisions. The methods involving the transcending of subjects are known as "fusion" and "unification." Fusion is usually confined to the combining of two or more subjects, as history, geography, economics, and sociology, or science and mathematics, while unification means the breaking down of all divisions and fusing the entire curriculum. In the attempts made to ignore subject divisions, the unit method of organization has usually been employed for presenting materials. There are various bases used for guiding teachers in building the units and selecting the materials, but there is much similarity between the units selected by various groups employing different bases. In this method, much of the content of general education is usually taught through units which involve the social studies, science, mathematics, and English and include art, music, and physical education when they are needed for a complete understanding of the unit. Integrating the curriculum by unifying or fusing various subjects will not, merely by this change in the organization alone, produce desired results. It merely facilitates growth and the attainment of desirable ends. The success of any integrated program depends, in the final analysis, upon the teacher and the techniques employed in directing learning. Good teachers do not need unification; poor ones will not integrate even if the curriculum is unified.

Nearly all social and economic problems involve many subjects in their solution. Under the subject organization, teachers are more reluctant to introduce subject matter outside their own fields in the solution of a problem, either because of a lack of knowledge or because

of a feeling that other phases are the work of other teachers. The integrated curriculum facilitates the cutting across of various subjects, but at the same time requires a different type of training for teachers. The extreme specialist, especially in the junior high school, must either be replaced or be retrained in a more liberal manner.

THE UNIT

The unit is by far the most widely accepted and universally adopted method of organizing materials for instructional purposes in those schools engaged in curriculum revision. Because it brings together all related materials so that they may be presented in close succession, relationships are more easily seen and integration is facilitated.

The unit is an outgrowth of several former methods of organizing and presenting materials, as the project method and the Dalton contract method. There are several concepts of units or several types. Morrison, who stimulated interest in the unit, defined it as "a comprehensive and significant aspect of the environment, of an organized science, of an art, or of conduct, which being learned results in an adaptation in personality."⁷ In this concept of the unit, the basis of unification is found in the subject matter itself, and the organization is logical.

Another type is the center-of-interest unit. This type may be defined as a series of related activities or experiences centering about a central theme, designed to realize some dominant purpose, without respect for subject-matter lines. In this concept, subject matter may be drawn from any field. The unifying basis is a central theme of pupil interest.⁸

Jones, Grizzell, and Grinstead describe still another type of unit called the "unit of adaptation." It is described as a "group or chain of planned, coordinated activities undertaken by the learner in order to obtain control over a type of life situation."⁹ The unifying basis

⁷ H. C. Morrison, "The Practice of Teaching in the Secondary School," rev. ed., pp. 24-25, University of Chicago Press, Chicago, 1931.

⁸ Arthur J. Jones, E. D. Grizzell, and Wren Jones Grinstead, "Principles of Unit Construction," pp. 14-15, McGraw-Hill Book Company, Inc., New York, 1939.

⁹ *Ibid.*, pp. 19-22.

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is the learning product to be achieved. It is an integrated combination of factual information, skills, habits, and attitudes that will result in an adjustment of the individual to a life situation. Various abilities are to be built up in unified patterns, rather than as isolated independent entities, and all activities are directed toward goals and purposes of the pupil.

Procedures in planning units. The accepted philosophy of secondary education, together with its aims and functions, should be the basis for selecting a complete list of logically organized activities and experiences pupils are to have in the secondary school. From this master list of activities, units may be developed, various experiences, activities, and subject matter being utilized to develop the unit and achieve the previously determined outcomes. Some steps commonly suggested in unit planning are:

1. Make an inventory of possible interests, abilities, and needs of pupils for whom the unit is intended.
2. Make a list of possible units or problems to be taught, indicating areas of life interests in which each functions.
3. From this list, select one which best meets the characteristics of a functional unit.
 - a. Determine the goals or purposes of the pupils which will determine the dominating idea or central theme.
 - b. List aims or outcomes.
 - c. Select a title.
4. Plan the development of the unit.
 - a. List a number of orienting experiences or approaches.
 - b. List a wide variety of possible activities, to give breadth.
 - c. List subject matter, materials, and equipment for enriching the different activities.
 - d. Formulate a plan for apportioning the work.
 - e. Anticipate pupils' questions which may arise, and plan means of helping them obtain material with which to make intelligent answers.
 - f. List a few culminating activities.
5. Index sources of subject matter, materials, and equipment for both the pupil and the teacher.
6. List possible methods of evaluating outcomes.

Unifying centers. Unification proposes to find a common element, or link, between all the seemingly unrelated experiences a pupil may have at school. If it is to succeed, it must be natural, that is, all elements

must fit naturally and logically into the unifying scheme. There are several bases for selecting and organizing units. If all teachers follow the same general basis, coordination may be facilitated, for all will be pursuing parallel subject matter. Some of the bases employed in various curriculum-revision enterprises are:

1. *Basic Needs.* There are several fundamental needs of man, such as the need for shelter, communication, mobility, cooperation, passing on our heritage, and mental and spiritual life, which may be used as a unifying scheme about which units may be built. The imperative needs of all youth previously mentioned may also be used.

2. *Centers of Interest.* Centers of interest are usually selected as representing the forces, agencies, and institutions in society that determine our way of life. This does not mean that the pupils are necessarily interested in the unit but that these phases are the core about which activities are grouped. Either the interest of the pupils in the unit must be developed or those units selected in which they are already interested.

3. *Social Functions.* Examples of the social functions or human activities about which all curricular experiences may be grouped are production, distribution, consumption, communication, transportation, protection and conservation, leisure time, aesthetics, ethics, and education.

4. *Community-centered Curriculum.* Some schools group the social studies, English, science, mathematics, and art about the community. All units selected are focused upon some phase of man's progress and are closely related to the lives of the students in the community.

5. *Life-adjustment Problems.* A recent trend is that of developing the content of the core curriculum around life-adjustment problems. This is based not on any new principles or objectives but, rather, on getting action on previously stated principles. A description of what is meant by life-adjustment education has been presented earlier in this chapter.

These are only a few of the unifying or integrating bases which have been employed. The one common feature of all bases for selecting units, whether on basic needs, social functions, or centers of interest, is that all are centered on human activities and have possibilities in socializing, vitalizing, and integrating the curriculum and all place emphasis on the purposes of education rather than on the content.

In many curriculum study programs, teachers meet in groups representing departments, schools, cities, or wider areas to plan units of instruction. Although most of these units are built about subjects, there seems to be a definite trend to integrate them with the community and to consider life-adjustment problems. A few of these are presented as illustrative.

In a bulletin published by the University of Kentucky,¹⁰ a section is devoted to the general concepts of units and their construction, followed by a number of units developed cooperatively. The titles of these are:

1. How to be well nourished.
2. Making and using graphs.
3. The short story in American literature.
4. Living in the family group.
5. Letters—Mirrors of our lives.

Although each is subject-centered to some extent, all do represent vital learning experiences and each goes beyond a single subject.

The Curriculum Committee of the University of Minnesota High School developed a series of units which have been published in bulletin form.¹¹ Illustrative units described are:

1. How is the War experience presented in world literature?
2. Politics in action.
3. The water supply in our community.
4. Buying insurance.
5. Our number system.
6. Mapping in applied geometry.
7. We learn to pull together: an eighth grade camping experience.
8. We're in the news: a seventh and eighth grade writing unit.
9. Let's go to press: a seventh grade printing unit.

Other groups, studying the same problem, suggest broad areas, which, in turn, suggest units which can or should be taught. An example of this is a series of principles developed by a group of teachers

¹⁰ Improving the High School Program through Unit Teaching, *Bulletin of the Bureau of School Service*, College of Education, University of Kentucky, 24 (June, 1952).

¹¹ Emma Marie Birkmaier, ed., *Illustrative Learning Experiences, Modern School Practices Series 2*, University of Minnesota Press, Minneapolis, 1952.

following a workshop procedure at the University of Indiana.¹² Some of the principles are: The secondary school of the future must

1. Provide instruction in mental hygiene.
2. Treat the problem of world government.
3. Provide opportunities to learn what atomic energy is and how it affects [human] lives.
4. Develop skills in discrimination in the use of mass media of communication, and give experience in the use of mass media.
5. Develop in students a better understanding of economic and social forces which operate in the modern world including a knowledge of our industrial system.

Another such bulletin was prepared by a group of educators at the University of Washington. This publication treats the place and the development of units and presents a number on various topics and levels. The units which are outlined for instructional purposes are: ¹³

1. Seashore animals.
2. Forestry: a unit in conservation.
3. Health and living standards: a unit in conservation correlated with home economics.
4. Our community: how people live together cooperatively.
5. The American way of life: a unit combining English and history.

The core curriculum. That portion of the curriculum which is integrated by combining all or portions of several subjects has been known by various names: common learnings, general education, and core curriculum, or core program. Several curriculum-revision programs have employed the latter term.

In practice, the core curriculum, consisting of those phases which all pupils must pursue, requires one or two periods each day devoted to units built about a unifying center. The length of time varies from a short period in the home room to two or three regular periods.

The subjects usually integrated are the social studies and English, other subjects being combined in varying degrees depending on the

¹² Howard T. Batchelder and Shirley H. Engle, Some Characteristics of the Secondary School of the Future in the Light of Modern Developments, *Bulletin of the School of Education*, 27 (May, 1951), Indiana University, pp. 13-24.

¹³ *College of Education Record*, 19 (January, 1953), University of Washington, pp. 17-32.

nature of the unit. One teacher may teach the core units, or several teachers work together teaching various phases of each unit. The single-teacher plan is to be preferred, but it is seldom that one teacher is prepared to teach all phases of each unit.

Ideally, functional units should be developed not about existing subjects but about present, vital problems of youth, and subject compartments should be ignored. In practice, this can hardly be done. Teachers have been conditioned to think in terms of subjects. Each has studied two or more subjects as fields of specialization, and it is logical to think in subject areas. Furthermore, the organization of most high schools is by subjects, which are scheduled at different hours. This makes it almost imperative that teachers build units centered about the subjects they teach. No harm will be done if subjects are used as aids in suggesting activities, provided undue emphasis is not placed on them and they go beyond single-subject lines. The final section of this chapter is presented in order to indicate how teachers may employ subjects to their best advantage and still build functional units which help meet the objectives of integration and aid youth in solving their life-adjustment problems.

Maintaining continuity. Unless care is exercised, the "unit" will become as watertight as the subjects which it was designed to break down and, by so doing, will become stereotyped and rigid. This will happen when units are presented as isolated bits of subject matter unrelated to any previous or subsequent experiences. To avoid this, each unit should be taught as a part of a still larger unit, and continuity should be maintained throughout several school years; different phases should be introduced as maturity and experience are acquired, and, at the same time, each part should be made a complete experience for the benefit of those who drop out.

The unit on the consumption of utilities is merely a part of a still larger one concerning the consumption of all commodities. Various phases of the consumption of goods may be presented as an organized whole in each grade. The phases selected will depend upon the maturity, needs, previous training, and interests of the pupils. To consider the consumption of gas one year, electricity the next, and coal the next would destroy unity. Some of this material should be presented in each grade, but from a different point of view. Consuming utilities is merely one phase of home life and is closely related to the

purchasing, preparing, and serving of food and also the intelligent purchasing and use of other commodities. Securing basic commodities involves commerce, trade, barter, money, banking, transportation, and international relationships. In various grades, different phases of the much larger unit, involving one's whole life, or society as a whole, may be presented.

CONTRIBUTIONS OF VARIOUS SUBJECTS TO UNITS IN AN INTEGRATED CURRICULUM

In any unit, various subjects may be employed to give one a better understanding of social and economic institutions and in solving life-adjustment problems. All problems have many phases, as the qualitative, quantitative, economic, personal, and social. Before they can be thoroughly understood and solved, all these phases must be considered. This means that many subjects are necessary and that each makes a definite contribution. An example of this may be found in the unit Our Tax Dollar. The social side involves the establishment and maintenance of many institutions necessary to supply man with his basic needs, which give service to society as a whole and are too expensive to be maintained privately. Such institutions are the school and police force. Another point of view is that of the individual and the personal benefits derived. If the problem of where and how our tax dollar is spent is considered only from the qualitative and emotional side, pupils will decide whether or not taxes are too high on the bases of their limited observations and experiences or in terms of what political party is in office. If quantitative thinking is introduced and the actual cost of all benefits derived from taxes is matched against what the individual would have to pay for the same services on a private basis, an entirely different conclusion will probably be reached.

The social studies. Since the social studies involve economics, sociology, history, political science, and geography, they become the core or the approach to many or most units. The social studies, with the exception of separate courses in history, can be taught wholly in units in the general curriculum. It is the social background and point of view which give meaning, significance, and vitality to a unit which otherwise would be divorced from the realities of life. A pedagogical method of presenting each unit is to begin with the present and then show

the development in order to understand how the present situation evolved.

Science and mathematics. There are few units which do not involve science and mathematics. The two go together, for unless mathematics is applied, it becomes a pure abstract science having little place in the secondary school, and when science loses its quantitative aspects, it is no longer a science. Units involving transportation, communication, getting a pure food supply, consumer education, utilities, measurement, and conservation of natural resources all require science and mathematics for a complete understanding. An example of the contributions of the social studies, science, and mathematics may be found in a unit on communication. This is too broad for a single unit and may be subdivided according to mediums, as the telegraph, telephone, radio, television, and mail service.

Considering the telephone, the social side involves the use of this medium of communication for social purposes, for the transaction of business, to secure aid, help, or assistance, and as the medium for the dissemination of current happenings. In the genetic development of communication, history makes a contribution. International relations are involved in all forms of communication.

Studied from a scientific angle, the actual construction of a telephone and the functioning of the various parts are considered. Too often the scientific approach is from the point of view of developing skill in repairing or constructing telephones, but this is not the primary outcome to be achieved. A knowledge of how a telephone operates, the connecting of all cities, homes, and countries with wires, the complicated wiring of a switchboard, and the mechanical operator or dial system accomplishes two major purposes: it satisfies the curiosity most youth have as to how telephones operate, and, still more important, it is the medium for developing an appreciation of the services rendered by the system and a respect for those whose ingenuity produced it. It is only incidental that a few youth may want to pursue some phase of it as a vocation or acquire a skill sufficient to build a working set as a hobby.

A complete appreciation of the service rendered is not gained until one has considered the cost of laying the lines, operating the switchboard, installing the telephones, and owning a telephone. Various types of rates can be compared. The cost of long-distance services

day and night can be computed, and by so doing additional respect is gained, for one cannot help being amazed that he can rent millions of dollars' worth of equipment to hold a personal conversation with a friend many miles away at a cost of only a few cents. Skill in making and reading graphs can be acquired by graphically representing the differences between cities, states, and countries in the number of telephones owned per 1,000 population.

English. English makes a contribution to the unit on communication, for instructions are needed as to how to hold a conversation on the telephone and how to use a telephone directory. This is, of course, a very limited concept of English in communication, for speaking and writing are essential elements in English.

English should not be "dragged" into a unit any more than any other subject. If a logical, natural place for it does not exist, it is not desirable to go out of the way to make a place for it. The question is often asked, "If a certain topic should be taught, but there is no place for it in any of the units, what should be done?" If it is definitely believed that a certain phase of subject matter should be in the curriculum and no unit logically includes it, then it should be taught separately either as a unit in itself or isolated from any social setting.

Unifying the curriculum means that all curricular activities are considered at the same time from the same point of view. English may be taught separately from a unit and still be unified with it by paralleling the unit subject matter. Often the English teacher may use the reading materials of a unit as a basis for teaching reading or may consider certain selections in literature which will give a background and breadth to the unit. Biography, historical novels, and certain poems may be selected which parallel the social studies, science, and mathematics content. The full responsibility for the teaching of English should not be delegated to one teacher. All teachers should make corrections in oral English, help increase and improve vocabularies, and demand the same standards for written work as would be expected by English teachers.

Art. Most of the machines, equipment, and appliances in a home can be made to operate efficiently without respect to their artistic appearance, but Americans prefer their machinery to be artistically as well as efficiently constructed. Some persons define art from the standpoint of utility; that is, that which best serves the purpose for which it is

made is most artistic. From another point of view, art is creation, regardless of how simple or crude the article created may be. These principles are true of food, shelter, furnishings, and clothing. From a purely utilitarian point of view, food serves no other purpose than to give nourishment; shelter, to protect one from the elements; furniture is solely for comfort; but again, if these necessities are designed artistically, they serve the double purpose of being useful and of giving satisfaction to one's aesthetic sense. Thus art has a natural and important place in the general curriculum.

Examples of the place of art are found in units on clothing, food, and shelter. The selection of a pattern or style in dress as well as the wearing of clothing is an art. Food is more appetizing if served in a colorful and attractive manner. Many of the best artists are devoting their talents to architecture. Home furnishings have become an important matter for consideration in the school, and the matching and blending of colors, the selection and identification of period types and designs of furniture, the choice of patterns in glass, china, silver, and pewter are all important elements in worthy home membership. Art can also be carried into the beautification of one's lawn, street, and entire community.

These phases of art have often been neglected, and consideration of them does not preclude additional work in art for those displaying an interest and talent. The general-curriculum requirements do not demand any more than the average amount of artistic ability, but if pupils who possess more are discovered, they should be given an opportunity in the electives to get additional training.

Emphasis on the arts in the general curriculum is on intelligent *consumption* rather than *production*. For every producer there are thousands of consumers, and the latter are just as important as the former. Education for consumption places emphasis on appreciation rather than on skill in production.

Other subjects. Subjects such as music, home and industrial arts, and physical education usually maintain separate organizations even in those schools unifying the common learnings. This does not preclude their making a contribution, for in many units phases of these subjects are logically included. These are mostly skill subjects, and although some of the skills will be learned incidentally in units, a complete mastery requires a separate organization.

The phases of music related to units are those pertaining to folklore or the characteristics of a people as described through their songs. The actual production of music and the development of appreciations involves skills which must be taught separately. Phases of home and industrial arts related to the selection and preparation of food, furnishings and their maintenance, clothing, and consumption of utilities may be easily integrated; but skills in cooking, sewing, and manipulating tools must be isolated and taught as separate organizations. This does not mean that skill subjects should be taught as ends in themselves. They must be taught as means to an end and integration achieved by incidental and cooperative methods.

Drill in fundamental processes. If possible, fundamental skills in arithmetic, English, and science should be acquired in context form; otherwise they might be taught as ends in themselves rather than means to an end, and pupils may miss their applications and relations to life. If they cannot be taught in contextual form, they should be isolated and studied independently.

Pupils who show deficiencies in fundamentals during the study* of units should be required to attend a class devoted to remedial treatment. The drill in this class should not be prescribed until a thorough diagnosis is made, and the drill should be made to fit the individual. Pupils should not be required to remain in the remedial class any longer than is necessary to overcome deficiencies. The class may be taught jointly by the mathematics, science, and English teachers according to the needs of the group. In order to socialize and vitalize the drill, the material may be related to life-adjustment problems in which the fundamental operations are involved, but emphasis must be placed on the process and not the problem, as contrasted with the place of skills in the unit.

Initiating fused and correlated courses. Because of administrative difficulties, it is often difficult to initiate a completely integrated program abruptly. A beginning may be made by combining, fusing, or correlating two or more rather closely related fields, like science and mathematics, and after these have been integrated, other subjects may be included.

Integrating science and mathematics is easier than separating them. Science can hardly exist without quantitative aspects, and it is better understood through the medium of mathematics. The two developed

together because of a social need; it was man who separated them for purposes of study. The social studies are easily integrated with either science or mathematics, for a study of democratic institutions involves many fields.

Composite or general courses. Combining separate divisions of a broad field into a composite course has been practiced for some time, as general science, general mathematics, home economics, social studies, and English. Each of these was formerly broken up into many divisions, and when first combined each division maintained its identity. Slowly, true general or composite courses are being evolved.

Difficulties encountered in integrating the curriculum. The difficulties encountered in attempting to integrate the curriculum arise from inertia or lack of sympathy for the movement on the part of teachers or patrons, the lack of trained teachers, and the lack of suitable reference materials and equipment. The traditional curriculum and methods of teaching are deeply rooted in the lives of teachers and patrons. There is a great tendency for teachers to retain the methods with which they are most familiar. To change to an integrated curriculum involves study and constant growth.

The teacher who is educated as a specialist is not so desirable in an integrated curriculum as one who has a more general education. One may be a specialist in his field and still not know where or how his subject is related to life or to other subjects.

In many schools, textbooks are almost the only source of material. These are usually inadequate in teaching units. If schools are to integrate the curriculum, libraries must contain a wide variety of suitable materials. Many desirable units cannot be taught in some schools because of a lack of suitable materials.

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II

THE CURRICULUM: GENERAL EDUCATION

General education consists of those activities which are considered so vital in the lives of youth that all should experience them. These should form the major part of all education and should be based on the common needs, interests, and concerns of those being educated. These common factors are general in nature, as indicated by the term employed to describe them, and are supplemented with special interests and elective courses.

The factors which are common to all youth, together with the imperative needs and interests of youth presented earlier, furnish the basis for building a curriculum of general education. This should be flexible, for all pupils differ even "with respect to needs, and it should contain a large variety of activities based on pupils' experiences so that it will be meaningful to them. General education should be unified about some core, for subject-matter divisions have little meaning for youth, and life experiences do not occur bound in subject-matter packages.

For the purpose of presentation, the content of the general-education phase of the curriculum will be treated logically under subject-matter divisions. This does not imply, however, that this is the method by which it should be organized for teaching. In the traditional school, subjects keep their identity; in more progressive ones, the subject matter and experiences are organized into units transcending subject-matter divisions. After each subject is discussed, the contributions of that subject to a series of units constructed about fundamental needs are presented. Further methods of integrating the curriculum of special interests and electives will be presented in subsequent chapters.

ENGLISH IN GENERAL EDUCATION

English is preeminent in the secondary-school curriculum. Regular or special courses are offered in every high school in the United States, and almost all pupils are registered in some course in English during every grade.¹ English has greater social utility than any other subject. In its three forms—writing, speaking, and reading—it is employed in all activities of life, vocational and social, and it is the medium through which all other subjects are taught.

Development of English in secondary schools. Although English is a basic subject today, it was not always considered so. It was taught very little in the Latin grammar school, for at that time the vernacular in any country was considered vulgar. Franklin proposed that English be taught in the academy, but it was gradually ousted from his school by the Latinists. It began being popular after 1800, when the great number of subjects taught in the academies were divided into two reorganized departments, the classical and the English. Among the subjects offered were English grammar, rhetoric and composition, declamation and forensic exercises. In 1817, English grammar became a requirement for college admission,² and in 1821 the Boston English high school was established, with English as an important subject. The subjects included were reading, grammar, declamation, rhetoric, composition, and criticism of English authors.

The important place of English today is shown by the high percentage of pupils enrolled in English courses, the fact that all high schools teach it, and that it is generally required for college entrance. Three units are the usual college-entrance requirement, although a few colleges require four.

At present, there are two types of courses in English: those known as regular courses, as English I, II, III, and IV, which are composites of grammar, literature, and oral and written expression; and special courses such as journalism, public speaking, and commercial English. Listed for the first time in 1949-50 were special courses in radio speak-

¹ Offerings and Enrollments in High School Subjects, Biennial Survey of Education, 1948-50, U.S. Office of Education, 1951, Chap. V, p. 6.

² I. L. Kandel, "History of Secondary Education," pp. 398-399, Houghton Mifflin Company, Boston, 1930.

ing and broadcasting, debating, and creative writing.³ The regular courses are more common than the special and are the English courses generally required, the others being offered as electives. About 90 per cent of all high-school pupils are enrolled in regular English courses, and many of the remaining 10 per cent are in special courses.

General objectives of English. English contributes to the worthy use of leisure time through reading, writing, and social conversation; to vocational efficiency, for there are numerous vocations requiring abilities in oral and written expression and facility and speed in reading; and to ethical character, for through reading one gains vicarious experiences and contacts with characters of fiction and history whose lives he might emulate. Most of the best literature is written not only for entertainment but for a secondary purpose, such as social reform, to disseminate a philosophy of life, to plead the cause of a forgotten group, or to gain sympathy and understanding of the lives of others. Literature makes a contribution to international relationships, for through it one gains an insight into the lives, culture, and philosophy of peoples of other countries. One learns also to interpret his own life by reliving it in fiction. Perhaps more than any other subject, English contributes to all the objectives of secondary education.

There are three aims of English as studied from three points of view: ⁴

1. As a tool.
 - a. Proficiency in reading, writing, and speaking.
 - b. Cultivation of habits of study and knowledge of the use of books.
2. As a medium for general culture. Self-discovery through appreciation of literature and other arts.
3. As a cultural discipline. Acquisition of a cultural medium of thought and knowledge of English (and American) literature and literary history.

Phases of these are stressed more at certain levels than others, although all are stressed at all levels. In the elementary school, English is stressed more as a tool; in senior high school, more as a medium for general culture and cultural discipline.

³ Biennial Survey of Education, *op. cit.*, p. 7.

⁴ Ruth Mary Weeks, "A Correlated Curriculum," Report of the Committee on Correlation of the National Council of Teachers of English, p. 81, Appleton-Century-Crofts, Inc., New York, 1936.

Specific objectives of English. Specifically, the main aims of the teaching of English are to acquire ability to think, to read, to speak, and to write.

English does not aim primarily to teach one to think, but thoughts deal with meanings, and since words are the chief means of conveying meanings, it is impossible to engage in more than the simplest thoughts without words and their meanings. Other things being equal, the greater the vocabulary, the more thinking one is capable of doing, and word knowledge is one of the most important phases of reading.

The elements which compose the three main divisions of English are:⁵

I. Speaking:

1. Informal conversation.
2. Giving directions.
3. Making explanations.
4. Telephoning.
5. Speaking before an audience.
6. Formal and informal debating.
7. Declamation of memorized material.
8. Speaking as a character in a drama.

II. Reading:

A. Oral

1. Reading aloud to others (informally).
2. Formal reading to an audience.

B. Silent.

1. To gain information.
2. For entertainment.

III. Writing:

1. Friendly letter.
2. Business letter.
3. Description, narration of an event, persuasion, and convincement.
4. Creative writing, free writing, or experimental writing.

These elements form the basis of the specific aims of English in high schools. They represent the most common and general needs of all or the majority of persons, both for the present and the future. Analysis of written forms of composition by school pupils reveals

⁵ A. E. Cross and Elizabeth Carney, "Teaching English in High Schools," rev. ed., pp. 31-32, The Macmillan Company, New York, 1950.

that a majority of errors made in writing could have been avoided had there been a greater mastery of fundamentals of grammar, form, sentence structure, and spelling.

Organization of English materials. Curriculum makers in English were leaders in unifying their own content into composite courses, eliminating the large number of separate courses, as English and American literature, spelling, grammar, declamation, rhetoric, composition, and reading. The courses have been organized so that all these phases have been fused. There are still two main divisions, language and literature, but if these are taught by the same teacher, the probability will be great that they will be closely related. A complete separation of the two divisions by years; that is, the teaching of literature one year and of language the next, or having two separate parallel courses, is contrary to the principles of integration. There are several methods of organizing the content to maintain unity:

1. *Unit Organization.* Units may be so selected and organized that they comprise all types of literature including drama, poetry, biography, the short story and the novel. Others may have creative writing as their central theme, others speaking, debating, and acting, while still others may embody all these phases. The core of units may be based upon a social situation, a chronological or geographic order, or a literary type. In any case, the selections will be the same, the only difference being in the grouping.

2. *Alternating Phases.* Another method consists in alternating languages and literature during each year's work, both being pursued in each year. Literature might be studied for a period of a few weeks, followed by a period of language activities. Although it is practiced, it is not recommended that literature be studied two or three days of each week and language the other days. This breaks the continuity.

3. *Systematic Study by Years.* A less progressive way, perhaps influenced by college-entrance requirements, is to devote one entire year to American literature, followed by one in English literature, the remaining two years being devoted to language activities. This type of organization is the one progressive teachers are attempting to get away from, for it consists in teaching the phases of English as though they were unrelated.

Sharing the responsibility for instruction in English with other teachers. Since English is used as a medium of expression in all school

activities, it is necessary for all teachers to cooperate in instructing pupils. This follows from the general principle that, if all persons engaged in the direction of learning activities of pupils do not work toward the same goals, efficiency in learning will not be obtained. In establishing correct habits of speech and proper form and construction in writing, if correct procedure is emphasized and taught only by the English teacher while others permit exceptions, little progress will be made. All teachers should know and be conscious of the objectives of English and attempt to uphold the same standards in written work and in oral expression in their classes as English teachers.

Trends in the teaching of English. Some of the more recent trends in the teaching of English are:

1. The teaching of literature in order to broaden understandings and interests seems to be predominant in courses of study.
2. It is generally recognized that standards for evaluating what pupils read must be developed and that teachers must develop in pupils lasting interest in reading.
3. English is leading toward a closer relationship with all other subjects in the curriculum.
4. Content is being selected on the basis of pupil needs and interests.
5. Appreciation is receiving greater emphasis than analysis.
6. Correct usage is receiving greater emphasis than formal grammar.
7. Oral composition is receiving greater emphasis than written.
8. Courses in remedial English are increasing in number.
9. The number of pupils enrolling in English courses has increased since 1934. Enrollments in English exceed total enrollments, indicating that many take more than an average of one course a year.

The content of English courses. During the three to four years of English usually required of all high-school pupils, each one will come in contact with various types of literature: poetry, short story, drama, biography, and history. Instruction will have been given in written and oral composition and in oral and silent reading. The literature surveyed will include both American and English and will be selected from that type of literature met in everyday life, the type required for social purposes, and the type that the student will most probably enjoy reading for pleasure.

The content of the instruction in oral and written expression should be based on the elements needed most frequently. Instruction in read-

ing should include skill in reading biography, fiction, poetry, science, history, sociology, mathematics, and types such as directions, descriptions, tables, graphs, charts, and maps. It should include also the use of books, how to find materials in published sources, and use of the library, reference books, and dictionaries.

Contributions of English in a unified curriculum. In order to show the contributions of English to various units in a unified curriculum, the unifying scheme of organization about man's basic needs has been selected. This same scheme may be employed also in coordinating the curriculum, that is, with each teacher presenting phases of the same unit at the same time. As mentioned before, if certain phases of English which should be taught do not fit logically into the unifying or coordinating scheme, they should be taught as independent phases.

The contributions are:

1 and 2. Food and shelter:

- a. The utility of language in barter, trade, commerce.
- b. Reading and writing various types of agreements and contracts.

3 and 4. Transportation and communication:

- a. Origin and nature of language.
- b. Development of language.
- c. Function of language.
- d. Language difficulties in migration.
- e. Skill in writing various types of messages: telegraph, letters.
- f. Oral communication: social, telephone calls, public speaking, radio speaking.
- g. Reading various types of records: bills, notes, bonds.
- h. Make-up and organization of a book.
- i. The library and its use.
- j. Development of vocabulary.

5. Cooperation:

- a. Reading newspapers and periodicals, especially articles concerning political parties, international relationships, and co-operation between groups.

- b. Learning to evaluate reports of current events.

6. Passing on our heritage:

- a. Literature of various types: history, biography, historical novels, old records, and documents.
- b. Ballads, legends, folklore.

7. Mental, spiritual, and cultural life:
 - a. Appreciation of literature and the drama as art and creation.
 - b. Contributions to literature through religious motives.
 - c. Literature for recreation and leisure.
 - d. The literature of the Bible.

THE SOCIAL STUDIES IN GENERAL EDUCATION

The term "social studies," as employed in secondary education, includes the entire body of the social sciences which have been selected for instructional purposes. As differentiated from the social sciences, the social studies are not so scholarly or scientific and are designed for instructional purposes. The social studies cover a broad field. The content must be social and must include all subjects which are primarily social.

Development of the social studies. History is the oldest of the separate subjects now forming the composite known as the social studies. In the Latin grammar school, history was taught incidentally through the medium of Latin, but it was a separate subject in the academies. In Franklin's Academy, the curriculum included "history, universal and national with chronology, ancient customs, morality, religion, and politics."⁶ The Massachusetts law of 1827 prescribed United States history for all high schools and history other than United States for all larger cities. By 1850, history was required for admission to Harvard and Michigan, geography had been relegated to the elementary school, and in some schools political science made an appearance.⁷ In the reports of the Committee of Ten, National Education Association (1893), a committee appointed in 1896 by the American Historical Association, and the Committee of Five (1907), the social studies other than history were almost neglected. In 1914, the U.S. Bureau of Education surveyed the status of the social studies. It found that civics and economics were the most usual offerings other than history and that the usual history offerings which were required, if any history was required, in order of frequency, were American his-

⁶ Kandel, *op. cit.*, p. 171.

⁷ Alexander Inglis, "Principles of Secondary Education," p. 535, Houghton Mifflin Company, Boston, 1918.

tory, ancient history, modern and medieval history, and English history.⁸

Status of the social studies. The present program of instruction commonly followed in secondary schools was influenced greatly by the report of the Committee on Social Studies and reports of other groups, for example, the Commission on the Social Studies and the American Political Science Association.⁹ These reports have had a far-reaching influence on practices and social-studies curricula, since many schools have conformed rather closely to the recommendations made. One recommendation, that of differentiating more clearly between the social sciences and the social studies, has not been followed very closely. The social sciences are more scholarly and intended for more advanced students in college. The social studies should be based more on life situations and problems of adjustment of youth and should be organized primarily for high-school pupils more than is now being done.

The survey of curricular offerings in 1949-50 made by the U.S. Office of Education shows many changes since the survey made previously—1933-34. Ancient, modern, and medieval history and separate courses in economics and sociology are decreasing in popularity. Fewer schools offer them, and fewer students pursue them.¹⁰ American history is still the leading course in the social studies. Since 1934, it has increased in enrollments, indicating that it is not being slighted in the reorganization of the social studies. World history, which made its appearance after the First World War, ranks second in growth trends. It has to a great extent replaced separate courses in ancient and modern history. Since the Second World War, more attention has been given to the Far East and to Central and South America.

In the social studies other than history, the major course in the junior high school is civics; in the senior high school, American government or problems of democracy.

Although there is much variation and a wide range of offerings in the social studies, the most common, but not necessarily typical, offerings as found by the Biennial Survey are:¹¹

⁸ *Ibid.*, pp. 541-542.

⁹ Edgar Bruce Wesley, "Teaching Social Studies in High Schools," pp. 84-95, D. C. Heath and Company, Boston, 1950.

¹⁰ Biennial Survey of Education, *op. cit.*, pp. 8-10.

¹¹ *Ibid.*, pp. 8-10.

Grade	Subjects Offered
7	Early American history, geography, civics
8	Recent American history, civics, state history
9	Civics
10	World history
11	American history, social problems
12	American history, problems of democracy, American government

New subjects in the social studies which seem to be increasing in popularity are Latin-American history, consumer education, and orientation in everyday living. Since the social studies are often integrated with English and other subjects in the core curriculum, many separate courses are losing their identity, although the content is still there. Many are merely reporting "core program."

General objectives of the social studies. Of the general objectives of secondary education, the social studies contribute mainly to citizenship and worthy use of leisure. In a broad sense, social studies contribute to all aims of education. More specifically, the most frequently stated general objectives are:

1. Promoting sociocivic efficiency.
2. Familiarizing pupils with information which may be used as a basis for judgments.
3. Making the world more intelligible.
4. Creating a desire for intelligent, willing participation in civic and social activities.
5. Developing a knowledge and appreciation of civic duties, rights, and responsibilities.
6. Developing power of evaluating facts and of clear, independent thinking and judgment.
7. Creating a knowledge and appreciation of the principles underlying sound and enduring government and society.
8. Promoting broad interests in, tolerance for, and sympathy with all races, creeds, and nationalities.
9. Increasing knowledge and appreciation of the past as a background for the present.
10. Furthering a love of country and intelligent patriotism.
11. Acquiring the ability to analyze propaganda.

Integrating the social studies. The social studies in the majority of schools are organized as separate subjects, and integration is secured

by incidental methods. In others, the social studies are integrated in a core program. In those schools employing incidental correlation to secure integration, subject divisions are retained, but the social studies are used to relate all subjects of the curriculum to a common point of view or to give the social setting or background for the subject matter of other courses.

In the core programs reported in the 1949-50 survey, the social studies were a part of 97 per cent of the core courses, and 95 per cent were of an English-social-studies combination.

In one type of integration, one subject, as history, is made the core about which relevant materials from other subjects are assembled. The units so organized may follow a chronological order, with the entire culture of each period studied as articulated units. In each period, the social, aesthetic, religious, cultural, and scientific lives of the people are studied.

The sequential relation of topics is important in the social studies. In the elementary school, American history and geography are pursued. In the junior high school, pupils learn more of their own government through civics, then pursue European or world history to give a background for a further study of American history in the eleventh grade. During the senior year, a more critical attitude may be expected from pupils concerning their own government, owing to maturity, background, and experience. A certain amount of indoctrination is necessary and legitimate in the first eight or nine grades, but as maturity is reached, this can be replaced by an analytical study of our own social order.

Trends in the social studies. Trends in the social studies which have been collected from various writers are concerned with all phases of the course and may serve as a summary of the place of the social studies in the secondary schools.

1. A very definite trend is to organize materials about units, topics, problems, or cultural periods.
2. In integrating the curriculum, especially in the required subjects, there is a tendency to make the social studies the core of the entire curriculum.
3. In organizing the courses in the special-interest fields, subject-matter divisions are being revised. Separate courses are being combined into composite courses, as problems in democracy courses, which are absorbing separate courses in economics, sociology, and government.

4. More emphasis is being placed on the building of good citizens than on constructing a logical academic curriculum designed to foster erudition. It is being recognized that scholarship is not synonymous with citizenship.
5. The aims of the social studies are being clarified, giving direction to the courses.
6. With respect to methods, more use is being made of visual materials, collateral and extensive reading, especially on current topics, observation tours to show the functioning of our government, and discussion and seminar methods rather than the "recitation" method.
7. There is a greater tendency to relate the past to the present, rather than to teach the past as an end in itself.
8. The range of subject matter is becoming wider.
9. More emphasis is being placed on character development and the importance of religion.

Content of the social-studies courses. According to Sexson, the major functions of society upon which the social-studies program must be based are:¹²

1. Conservation of life, liberty, and property.
2. Production and consumption of food, shelter, and clothing.
3. Transportation of goods, services, people, and ideas.
4. Recreation.
5. Expression of aesthetic impulses, such as art, music, and literature.
6. Religion.

In selecting materials for the general-education content, the principles and techniques used for determining the entire curriculum are applicable in this field. The objectives of all education and the more specific objectives of the social studies should be the major basis; but certain conditioning factors, as the ability, maturity, and past experiences of the pupils, the limitations of the school calendar, library, and equipment, and the local social setting will modify and influence the selection of the social-studies content.

Some suggested activities selected and organized about units in a unified or coordinated curriculum are:

I. Food:

1. Economic institutions for securing:
 - a. Wholesale and retail stores.

¹² John A. Sexson, A Practical Program for the Social Studies, *Social Studies*, 28 (February, 1937), pp. 53-58.

- b.* Raw materials.
 - c.* Mediums of exchange.
 - 2. Local, state, and international trade.
 - 3. Economic geography.
 - 4. Utilities.

II. Shelter:

- 1. Housing conditions.
- 2. Problems of moving.
- 3. Social institutions provided for:
 - a.* Sanitation.
 - b.* Fire prevention.
- 4. Securing necessities of life:
 - a.* Manufacturing; labor problems.
 - b.* Trade and commerce.
- 5. Police, state, and national guards.

III. Communication:

- 1. Mediums: mechanical devices, books, papers, records, reports, pictures.
- 2. Effect on popular opinion.
- 3. Illiteracy and education.
- 4. Propaganda.
- 5. International relations and communication.
- 6. Historical development of communication:
 - a.* Signals.
 - b.* Runners.
 - c.* Pony express.
 - d.* Modern devices.

IV. Transportation:

- 1. Purposes of moving or migration: food, protection, war, climate, religion, freedom, curiosity, recreation, health.
- 2. Historical development of method of transportation.
- 3. Problems in transportation: barriers.
- 4. Immigration and emigration.
- 5. Safety in transportation.
- 6. Effect on social relations.
- 7. Effect on national relationships: commerce, war, treaties, tariff.
- 8. Services rendered by government in transportation; parcel post.

V. Cooperation:

- 1. Social: historical development of family, clan, tribes.
- 2. Political: city, state, nation, United Nations.
- 3. Types of political theory.

4. Functions of government.
5. Economic institutions for production, exchange, and distribution of wealth.
6. Institutions for beneficence.
7. Reasons for cooperative enterprises; nonproflitable enterprises.

VI. Passing on our heritage:

1. Heredity and environment.
2. Marriage and divorce.
3. Family relationships and problems.
4. Social heritage: passing on language, numerals, art, literature, modes, customs, traditions.
5. How our heritage is passed on: educational institutions, oral legends, ballads, folklore, churches.
6. Economic heritage: wills, testaments, inheritance.

VII. Mental and spiritual life:

1. History of religious groups and their influence on life, customs, institutions, learning, politics, science, education, art, literature.
2. Public opinion and devices for influencing radio, press, theater, pulpit, pressure groups.
3. Recreation.
4. Opportunities for culture: art, literature, music, science, travel, pictures.

This is not intended to be a complete or exhaustive list of possibilities. It is presented merely to show the possibilities for working social-studies materials into the general curriculum.

SCIENCE IN GENERAL EDUCATION

Because of the increased complexity of modern civilization and the advances in technological fields, science is becoming increasingly important. It contributes to most of the cardinal principles of secondary education and represents a real need in both the present and future lives of all pupils.

Historical development. Science was rarely taught in the Latin grammar schools, was in its infancy in the academy, and made its greatest gains in the high school. The earliest course taught in the high schools was called natural philosophy, which was a forerunner of modern physics. During the Civil War period, the usual subjects offered were physiology, chemistry, geology, astronomy, botany, and natural philos-

ophy. From 1865 to 1900, zoology made great gains, and astronomy and geology decreased in importance. Physiology, zoology, and botany were combined into biology, and by 1922 the U.S. Office of Education reported the first appearance of general science, which has increased in importance since that time.

At present, the four main science courses in order of popularity are general science, biology, chemistry, and physics. The two usually required courses are general science and biology, although several courses may be substituted. Examples are agriculture, home economics, and conservation. Physics, chemistry, and advanced courses in biology, are usually electives.¹⁸

General objectives of science in secondary schools. Science makes a contribution to health, worthy home membership, worthy use of leisure time, command of fundamental processes, vocational efficiency, and citizenship. The present is often called the age of science, so wide and varied are its applications and uses. Health is improved through a knowledge of human physiology; homes are equipped with electrical appliances; fuels such as gas, oil, and coal are consumed; nearly all youth need a familiarity with an automobile; and purchasing, consuming, getting, and preparing a pure food supply, all contribute to worthy home membership. Many are filling their leisure hours with scientific diversions such as photography, radio, chemistry, or astronomy. Vocationally, there are hundreds of fields requiring scientific backgrounds. Typical fields are mechanics, machinery, aviation, the automotive industry, radio, television, photography, and all areas pertaining to electricity.

More specifically, but still of a general nature, the objectives of all science instruction as formulated by various writers are:

1. To enable the individual to make satisfactory adjustments to those problems of his environment the solution of which involves scientific facts and principles.
2. To enable pupils to make satisfactory adjustments to increasingly complex problems of a scientific nature.
3. To help youth interpret and understand certain aspects of the world in which he lives.
4. To dispel superstitions and erroneous beliefs.

¹⁸ Biennial Survey of Education, *op. cit.*, p. 13.

5. To develop the ability and the habit of applying scientific methods of thinking to the solution of problems.
6. To develop a functional understanding of the major generalizations of science and associated scientific attitudes which will result in life enrichment.
7. To help pupils appreciate the complexity and orderliness of the universe.
8. To develop the ability to use the scientific method in the solution of problems encountered in everyday life activities.

One additional aim applying more particularly to the junior-high-school level is:

9. Opportunities for exploration, for the purpose of acquainting the pupil with the different natural sciences, and to help him to find out whether or not science holds any interest for him and, if it does, where his interests lie.

To formulate separate objectives for each division of science rather than for the entire science program helps perpetuate subject-matter divisions. It is advisable for each teacher to formulate specific outcomes to be achieved from a unit or day's lesson; to have separate course objectives implies that all are not working toward the same goals.

Content of science in general education. In those schools organized along traditional lines with subject-matter divisions maintained, general science or biology should be required of all pupils. These should be offered in the ninth and tenth grades in order to reach as many pupils as possible. The content of the general-science course should be built about problems with a social background without regard for subject-matter divisions in science. Frequently, general-science texts are not general but consist of chapters of specific sciences intended as a survey course rather than a course to acquaint pupils with their environment. Biology should stress health and sanitation, not by teaching the names of parts of the body as was done in former courses in physiology, but by developing health habits and creating respect for a sound mind and body.

The next step in advance is to have more than one year of general science and to abolish biology as a separate course. Science should begin in the elementary school and be a continuous, articulated course

through the ninth grade, required of all pupils. This plan would call for three years of science extending through the junior high school. The broad general topics should be built around transportation, communication, food, shelter, clothing, fuels, machines in the home, safety on the highways, sanitation, preventive medicine, plant and animal life, and the physical world in which we live. The course should be made practical and functional by developing concepts, helping pupils make applications, and relating the content of the curriculum to the present environment of the pupils.

Integrating science in the curriculum. Science may be integrated easily with the other subjects of the curriculum; it occupies a place almost on a par with the social studies as a core for building units.

In the participation and cooperation plan, the social-studies, mathematics, and English teachers can keep informed of the work of the others and assign topics, reports, or papers to be written which link one subject with another. If a phase of transportation is being studied, it can be related to the social side by considering the westward movement in covered wagons. English teachers may assign topics from science for papers, and deficiencies in mathematics as revealed in science may be mentioned to the mathematics teacher, or, conversely, the mathematics teacher can consider basic skills required in science for her course of study.

It is only a step from this to the coordination method, in which the content of the several courses parallel each other. Science played an important part in history, and as certain periods of history are studied, the scientific discoveries of the time may be considered. The English teacher may simultaneously deal with the literature of the period. To be sure, all courses will parallel each other far more at one time than at others, but if a consistent attempt is made, far more is possible than may be envisioned at the outset.

Attempts to integrate the curriculum by unification should begin by combining science and mathematics around a social-study core. During the authors' experience in building and teaching in a unified curriculum, a need was experienced before unification. In teaching junior-high-school mathematics, some of the units of the text were "civic enterprises" involving the purpose of collecting and ways of spending taxes; "savings and investments," which involved a study of the bank and insurance company as economic institutions; and "trans-

portation," which began with why people travel or transport goods, considered the scientific principles of constructing vehicles, and then the cost of constructing and operating. It soon became obvious that to break up these already integrated units for instructional purposes was a process of disintegration and that the most common-sense way to present them was in a body.

A number of topics, experiences, and subjects which should be presented in science in the core curriculum and organized about a unifying scheme are:

I. Food:

1. Soil: types, how formed, fertility, preservation, conservation.
2. Water: occurrence, composition, supply, purification, rain, dependence of life on water.
3. Climate: determiners, suitable conditions for life, man's attempts to control climate.
4. Plants and their uses: domestication, conditions for growth, food supply, other materials from plants, range of growth.
5. Animals as related to man: domestication, uses of raw materials, migrations, reproduction.
6. Mineral resources: types of minerals, how formed, preparation, and uses.
7. Topography: effect of topography on climate, plant and animal life, character of people.
8. Seasons: changes and their causes, storing food for winter, effect on plants and animals.

II. Shelter:

1. Homes: materials of construction, insulation, heating, lighting, ventilating, preserving.
2. Clothing: man's heating system (oxidation, perspiration), need for clothes, materials, manufacture (dyes, spinning, weaving).
3. Protection from bacteria, animals, fire, flood, storms, wind, thieves.

III. Communication:

1. Analysis of speech and musical sounds.
2. Methods of communicating, as telephone, telegraph, and radio, and scientific principles of construction.
3. The phonograph and sound pictures.
4. Permanent records: paper, ink, printing, photography.
5. Acoustics: echoes, reverberations, absorption, reflection.
6. Properties of musical instruments.

IV. Transportation:

1. Scientific devices in transportation: wheel, engines, and machines, propeller, wings.
2. Principles of utilizing energy to produce power.
3. Fuels used to secure locomotion and their efficient use and conservation.
4. Safety devices: automatic controls, mechanical perfection, materials, personal factor.
5. Roads: materials, grades, friction.
6. Transportation of various types of materials: electricity, gas, coal, oil.
7. Transportation by various methods: land, water, air.

V. Cooperation in securing basic needs:

1. Technology and large-scale production.
2. Advertising: purposes, evaluating.
3. Flood control, erosion, fire protection, power dams.
4. General health and sanitation.
5. Science and its contributions to war and peace.

VI. Passing on our heritage:

1. Life: reproduction.
2. Heredity and eugenics.
3. Sex hygiene.

VII. Mental and spiritual life:

1. The orderliness of nature.
2. The beauty and rhythm of nature.
3. Development of scientific attitude:
 - a. Suspended judgment.
 - b. Measurement.
 - c. Control of variables.
 - d. Analysis and synthesis.
 - e. Interpretation.
4. Religion and science.
5. Limitations and contributions of science:
 - a. Utility.
 - b. Leisure.

MATHEMATICS IN GENERAL EDUCATION

Regardless of whether mathematics had its genesis in social and economic utility or whether it originated in the mind of man as an

abstraction, the early applications were for gaining a better understanding of a changing physical world; later it was applied to the economic and social life of the people. The application of mathematics to the social, economic, and physical world changed man from a qualitative to a quantitative thinker and created order out of chaos.

With the exception of the fundamental skills and operations of arithmetic, all mathematics was later placed in the curriculum of the colleges and universities and was studied as a pure, abstract science separated from its natural setting. The subject became formal and was studied only by those who enjoyed abstract relationships. Later, algebra, geometry, and trigonometry were introduced into secondary schools retaining their organization designed for college students. When the high school was more selective, formal mathematics was enjoyed by the majority of pupils, many of whom found some use for it later in college courses. After the expansion period of the high school began (about 1890), the intellectual level of the high-school population gradually declined and a smaller percentage of pupils was able to profit by courses in formal mathematics. Likewise, the percentage of graduates attending college has decreased. However, the percentage of pupils enrolled in mathematics did not decline until about 1910. Since then there has been a steady decrease in the number of pupils pursuing courses in algebra, geometry, and trigonometry. The decline lagged behind the expanded enrollment because the curricula of most schools were narrow and the offerings limited to the extent that it was necessary to take courses in formal mathematics in order to secure enough credits to graduate. Furthermore, two units of mathematics were usually required to meet college-entrance requirements.

The reaction against mathematics. The first reaction against mathematics came from pupils who questioned the value of algebra and geometry. It was later challenged by the parents, especially those who had not been convinced of its value on purely cultural and disciplinary grounds.

Criticism was made because there was an utter disregard for individual differences in mathematics, the same amount and kind being offered for every pupil regardless of vocational needs, interests, or abilities. Protests were also made against the unusual number of failures in mathematics, especially in algebra, and it was challenged also be-

cause of the formal manner in which it was taught. A certain amount of precise formulation, abstraction, and symbolism is essential, but not as much as was being employed. The formal aspects can be retained if, at the same time, life is introduced into the subject. College-preparatory courses and the sequence in which they have been offered have not changed to a great extent for many decades, and these represent the only mathematics courses available to many students who cannot use them in their life-adjustment problems.

Objectives of mathematics. In the past, the objectives of all mathematics courses beyond arithmetic were aimed at college preparation and discipline. Arithmetic was taught mostly for its practical values and still is. New aims have now been recognized which can be divided into two categories:

1. Practical or information-acquiring objectives. There are many problems and questions which can be solved or answered only through the use of numbers, as finding costs, areas, volumes, and amounts. These are practical aims and are needed in everyday-life situations. They are needed in homes, in business, in investments, in insurance, and in practically all vocations.

2. Appreciation and understanding, or cultural values. Many things can be described or understood only through their quantitative aspects. For example, the complexity and magnitude of the universe, the extent of our communication and transportation system, the size of countries and geological formations, and the determination of relationships which exist can be understood only through the use of mathematics; and with an understanding comes appreciation. This same aim may be applied to geometric forms found in art, in nature, and in architecture and to mathematical relationships, which have a unique form of beauty of their own because of their exactness and orderliness.

The first of these aims, that of immediate, or direct, usefulness in life, has demanded more attention in the last few years than formerly. The practical aim was introduced to make mathematics more functional and to abolish some of the formality.

Mental discipline and formal training can no longer serve as the chief support of a program in mathematics which may be of little worth in and of itself. It has become necessary to develop curricular materials which are worthwhile in themselves. Facts need to be taught in their social setting if pupils are to learn to utilize the products of

mathematical instruction. No longer can the average child be expected to apply facts taught in the classroom to life situations without assistance.

The status of mathematics. There was a decline in the enrollments in mathematics, with the exception of arithmetic taught in the seventh and eighth grades, from 1910 to 1934, reported for the entire United States. As shown in Fig. 16, from 1890 to 1910 there was a gradual

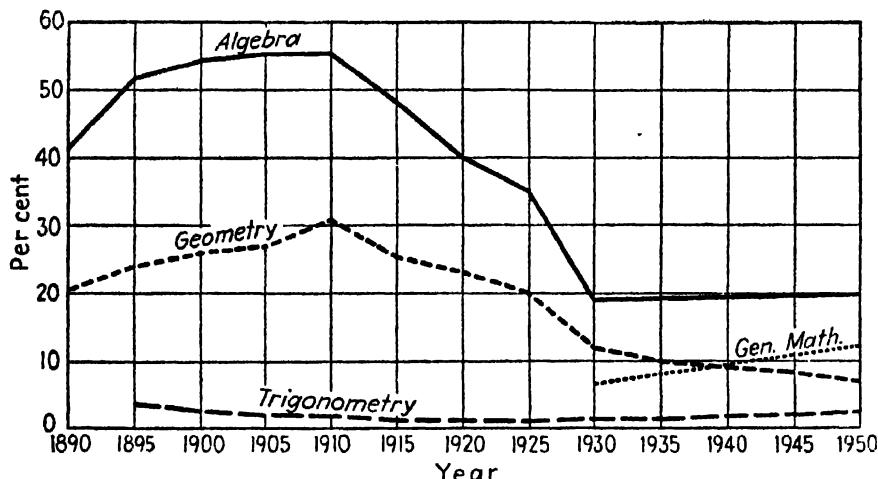


FIG. 16. Percentage enrollment in algebra, geometry, and trigonometry in secondary schools of the United States from 1890 to 1950. [Drawn from data presented by Frank M. Phillips, *Statistical Summary of Education, 1927-28*, U.S. Office of Education Bulletin 3, 1930, p. 437; Carl A. Jessup, *Registrations in Mathematics, School Life*, 22 (March, 1937), pp. 211-212; and *Biennial Survey of Education, U.S. Office of Education Bulletin*, 1951, pp. 15-16.]

increase in percentage enrollments in algebra and geometry; but from 1910 to 1934 there was a gradual decrease. The actual number of pupils enrolled for these courses has increased as a result of the increased enrollment of the secondary school, but when computed on a percentage basis the increase is not proportional to the total growth. Part of the decrease in the percentage enrollment in algebra and geometry was due to the fact that as the curriculum was enriched and expanded many pupils who formerly took these courses, since they were the only ones offered, pursued courses in other phases of mathematics, such as composite mathematics or business arithmetic. Part of the decrease was due also to the change in the nature of high-school pupils. The academically selected pupils of an earlier generation were required to take some courses and elected still others.

Alegbra is no longer a universally required subject, although it is offered in practically all high schools, and about 20 per cent of all pupils are taking first- or second-year algebra. It is usually offered in the ninth grade, and 63.5 per cent of all pupils in that grade are enrolled in it. Those pupils of the ninth grade who do not elect algebra are usually enrolled in general mathematics. These are about 40 per cent of the total.

Other courses in mathematics, in order of enrollments, are plane geometry and trigonometry. Geometry has declined since 1934, algebra has remained about the same, general mathematics has increased in enrollments, and trigonometry has increased slightly. One new course appeared in the 1949 survey—mathematics review, taught mostly in regular and senior high schools and reported in schools of 24 states.¹⁴

The reorganization of mathematics. Several attempts have been made to reorganize mathematics so that it would be more interesting and have greater utilitarian value. These are based on a number of guiding principles, which are:

1. The fundamental skills can be learned in the first six years of the elementary school. In the junior high school, pupils need practice and use of the skills learned, plus the addition of new skills.
2. Mathematics should be as informal as possible.
3. Mathematics should not be taught as an end in itself, but as a means to an understanding of present environment. However, it should not be considered wholly as a tool.
4. A wide variety of mathematics should be introduced to each pupil for social utility and exploratory value.
5. Continuity should be maintained and stressed. Subject matter begun in one year should extend through several years, with varied applications.
6. In large schools, more than one kind of mathematics should be offered.
7. College-preparatory mathematics should be eliminated from the ninth grade and offered only in the senior high school—grades 10 to 12.
8. More arithmetic should be taught in the high school.
9. Vertical, or conventional, organization of subject matter should not be held sacred. Mathematics can well be built about a social-studies or science background or unified with the general curriculum.

Of the various methods of reorganization, the following are typical: (1) general or fused courses, (2) giving mathematics a social-studies

¹⁴ *Ibid.*, pp. 15-16.

background, (3) integration by coordination or cooperation, and (4) integration by unification.

1. General Mathematics. Organization into composite courses in the junior high school is more pedagogical than logical. An appeal is made to the pupils' interests, making the courses social or child-centered rather than subject-matter-centered. Activities are related to the present and most probable future needs of the pupils and to materials of local interest and value. Applications and relationships to other fields are made and pointed out. Continuity of subject matter is better achieved and articulation between the junior and senior high school is improved by avoiding an abrupt introduction of newer types of courses, as algebra and geometry. The fact that general mathematics is increasing in enrollments indicates that these values are being recognized. One factor which has prevented the growth of the course is the attitude of some teachers who feel or state that it is for the nonacademic type of student, while algebra is for the better students. This attitude is unfounded, for general mathematics requires as much or more ability and is as good as, if not better than, algebra for preparation for college.

2. Social-studies Background for Mathematics. Many new textbooks are being organized about a social-studies core or background.¹⁵ There is a need for teaching more social studies and considering more economic problems, and if the social studies are united with mathematics, it will make them more practical and vital. The chief purpose of this trend is to develop a scientific attitude toward social, economic, and political problems by means of quantitative and logical techniques of teaching. Each individual is a worker, buyer, consumer, saver, dweller, property owner, taxpayer, voter, and communicator and traveler—all requiring mathematics to do these things better. This is also an excellent way to integrate mathematics and the social studies.

3. Cooperation and Coordination. Mathematics may be coordinated with the core curriculum following the scheme of organizing about basic needs, or it may be integrated through a close cooperation of all teachers. Mathematics and science are especially related, and as shown, the entire course may be given a social-studies background. It is diffi-

¹⁵ See Harl Douglass and Lucien Kinney, "Mathematics for Today," Henry Holt and Company, Inc., New York, 1945. A series of texts for junior and senior high schools.

cult to find any close relation between English and mathematics, but in all other subjects there are numerous quantitative aspects. It is involved in home arts in marketing, budgeting, cutting recipes in half or doubling them (for example, what is $\frac{1}{2}$ of $\frac{3}{4}$ cup of sugar?), and measuring in sewing and furnishing a home. In industrial arts, it has practical applications in measurement, in designing, and in making estimates and computing costs of materials. Proportion and symmetry are quantitative aspects of art, and music is a series of mathematical ratios.

4. Mathematics in a Unified Curriculum. In a unified or integrated curriculum in which all subject matter is organized in units, mathematics will be taught first only as it makes a contribution to the development of the unit and second as remedial work as given on fundamental operations. During the study of the units, pupils' weaknesses can be diagnosed and remedial instruction given, either at the time or during a period devoted exclusively to that purpose.

There are a few units which do not involve quantitative relationships. In these cases, it is not necessary or advisable to include mathematics just to teach it in the unit. The applications are so widely distributed that mathematics does not have to be forced in anywhere; it usually is found necessary. A few of the contributions made by mathematics to units based on fundamental needs are:

I. Securing a food supply:

1. Relationships between price and quality of various commodities.
2. Savings from bulk purchases.
3. Relationship between price tenuis and quantity buying.
4. Relationships between seasons and prices.

II. Shelter:

1. Graphs showing percentage of homeowners in the United States.
2. Relative costs of owning or renting.
3. Costs of upkeep on homes.
4. Financing loans for home buildings.
5. Relative amounts of budget for food, shelter, recreation, travel, and advancement.

III. Communication:

1. Cost of owning a telephone.
2. Cost of sending messages by various mediums and at various times of day.

3. Relationships of costs to distances.
4. Graphs of the number of telephones per family, or per person, in various countries.

IV. Transportation:

1. Speed of modern agencies: timetable by land and air.
2. How shipping charges are determined and relative costs by
 - a. Parcel post.
 - b. Express.
 - c. Freight.
 - d. Air.
3. Cost of special services:
 - a. Special delivery.
 - b. C.O.D.
 - c. Insurance.
4. Relation between speed, distance, and time.
5. Cost of owning and operating an automobile.
6. Transporting money: checks, drafts, money orders.
7. Computing distances on and reading road maps.
8. Safety: speed and power; speed and stopping distances.

V. Cooperation:

1. Exchange: money, banking, checks.
2. Foreign trade.
3. Credits: bonds, loans, notes.
4. Taxes: computing rates and taxes to be paid.
5. Chain stores.
6. Retail and wholesale prices.
7. Life insurance.
8. Civic enterprises: streets, police and fire departments and their costs.
9. The cost of education, public welfare, and sanitation.
10. Comparison of costs of services on a cooperative and individual basis.

VI. Passing on our heritage:

1. History of mathematics.
2. Mathematics in the laws of inheritance.
3. Passing on economic wealth: inheritance taxes, forms of wealth as property and savings.

VII. Mental, spiritual, and cultural life:

1. Interpreting the orderliness of nature in mathematical terms: ratios, laws, formulas.
2. The functional concept or relationships due to
 - a. Time and space.

- b.* Rhythm.
 - c.* Form and position.
 - d.* Function.
- 3. The geometry of nature.
- 4. Mathematics as an exact science used to explain the universe, the unknown, and religion.
- 5. The place of mathematics in recreation and leisure-time pursuits.
- 6. Mathematics in art and music.
- 7. Mathematics as a form of self-expression, as a medium of communication, and as a universal language.

Principles pertaining to general education or common needs. The following principles may be derived from the materials presented in this chapter concerning general education:

1. A curriculum of general education or common learnings should be planned which will meet the needs of all pupils. The content of these courses should be centered about life-adjustment problems.
2. Although the general-education curriculum should be required of all pupils, a certain degree of flexibility should still be maintained in order to have greater assurance that the needs of all pupils will be provided for. Pupils differ even with respect to common learnings.
3. The subject matter of the common learnings should be drawn from the major areas of learning: English, social studies, science, mathematics, and other subjects.
4. The major divisions of subject matter should be integrated in some manner, for life-adjustment problems do not occur in subject-matter compartments.
5. The core curriculum should be introduced, especially in the junior high school, as a method of integrating the content of the curriculum.
6. The unit seems to be the best form of organization.
7. If certain phases of subject matter do not fit logically into units, these should be isolated and presented separately if they are believed to be of vital importance. This is especially true of certain phases of English and mathematics.
8. The social studies should provide the core for most units in the core curriculum. In science and mathematics, a social background may be given to all units, for otherwise the subjects would be taught outside their social settings.

Selected References

See list at the end of Chap. 12.

I2

THE CURRICULUM: GENERAL EDUCATION (Continued)

The four so-called solid subjects, English, social studies, science, and mathematics, presented in the previous chapter, are no longer adequate to meet all the needs of youth in modern society, or to fulfill all the aims of secondary education. These subjects make contributions to all the aims, but not all of the aims are met completely by them. Additional growth and development is acquired through other activities such as physical education and home, fine, and industrial arts, which are organized as separate subjects, and new topics which have recently been accepted by the school, such as safety education, consumer education, and conservation of natural resources, which should be integrated with the entire curriculum rather than organized as separate subjects. Likewise, free activities, as clubs, assemblies, dramatics, and student government, should be an integrated part of the entire curriculum.

HEALTH AND PHYSICAL EDUCATION

If modern education is aimed toward helping youth live in present-day society, mental development alone will not suffice, but every phase of life must be considered. Although it has long been known, it has only recently been emphasized that a child is an integrated organism and that the physical and mental body are not two distinct and separate bodies, but two interdependent, coordinating entities. These develop concomitantly, and what affects one, affects the other. It is true that one may be developed ahead of the other, for the development of physique and of attitudes are not closely related; but the functioning of all organs of the body is directly related to mental development, so that physical and mental training cannot proceed independent of each other.

Physical education is one way of meeting the health objective, and health is one, but not the only, objective of physical education. In order that the health objective might not be neglected, health is now included with the term "physical education."

Physical education may be divided into three major divisions:

1. *Instruction.* This includes class instruction in sports, recreation, fair play, personal hygiene and sanitation, and health.

2. *Supervision.* Pupils must be supervised in activities on the playground and in the gymnasium. In addition, classroom instruction and health examinations would probably be ineffective if they were not closely followed up to see that principles were practiced and discovered defects corrected.

3. *Service.* Services performed by the school for the pupils include medical inspection, vaccinations, and first aid in cases of injury.

Historical development. Physical education is as old as secondary education itself and is one of the three great aspects of all education, namely, physical, mental, and moral training. The Greeks and Romans placed great stress on physical development, partly for greater efficiency in soldiers and partly as an end in itself, that is, for bodily grace and beauty. At no time have these three aims been stressed equally, and various groups and schools have stressed one more than the others. The present tendency is to stress all three.

During the nineteenth century and in the early twentieth century, physical education took the form of calisthenic exercises for the formal parts of physical training and games during recess periods for the informal types. The latter had little or no supervision, pupils being permitted to run, play, and shout as they wished. The terms applied to activities of a physical nature were "physical education," then "physical culture," and later "physical training." In the present century the term "physical education" with the term "health" is employed. The earlier forms of gymnastics and calisthenic exercises were concentrated and shaped to fit the academic schemes of the day. Such activities were designed to correct physical disabilities, confer agility to limbs, and develop gracefulness and strength. They were considered so valuable and desirable that they were "above the necessity of praise."¹

¹ James Frederick Rogers, *Physical Education: 1839-1939*, *School Life*, 25 (December, 1939), p. 69.

The next phase was the development of highly organized sports for the benefit of a few pupils only. Interschool contests in football and basketball were the most popular games. So great was the emphasis placed upon developing winning teams that large sums of money were spent for coaches and equipment, to the neglect of the physical needs of the majority of the student body. Football fields with bleachers and gymnasiums for basketball were constructed, mainly for inter-school rather than intramural sports. If the gymnasiums were used for other purposes, it was to have calisthenic exercises or gymnastic exercises with dumbbells, wooden horses, parallel bars, and the punching bag.

Health needs of secondary-school pupils. From 1928 to 1934, the number of pupils enrolled in physical education increased from 15 per cent to 50.6² per cent. In 1948-49, 91 per cent of pupils in junior high school and 69 per cent in regular and senior high schools took physical education.³ This increase was the result of several factors:

1. A realization that there were many disabilities which could be corrected. Surveys of the health and physical handicaps of high-school pupils revealed disabilities which could be corrected by proper remedial treatment and activities.
2. A realization that the existing athletic program was reaching only a few pupils and that these were usually selected on the basis of their physical fitness. Quite frequently the athletic contests injured rather than aided the health of the participants because of poor coaching or no coaching, too strenuous exercise, or injuries sustained in contests.
3. A realization that a physical-education program was broader than health; that it should include training in ethical character, worthy use of leisure and recreation, and mental hygiene; and that to meet these objectives, the program should include all youth enrolled in secondary schools.
4. An attempt to compensate for the lack of exercise formerly obtained while doing chores at home or part-time work and by walking. The extent to which pupils ride to and from school and to other places has caused some to call our way of life "a culture on wheels."

During the Second World War, it was found that about 50 per cent of American youth had disabling defects, most of which could have

² Carl A. Jessen, *Registrations in Fine Arts and Physical Education, School Life*, 22 (October, 1937), pp. 55-56.

³ *Biennial Survey of Education, 1948-50, U.S. Office of Education, 1951*, Chap. V, p. 24.

been detected and corrected years earlier.⁴ A large number of these defects found were evident 15 years earlier, as shown by school examinations. To prevent this and in order to aid all pupils, each school should provide for the following needs of all youth:⁵

1. A safe, sanitary school environment.
2. Protection from infections.
3. Information on how to live in a healthy manner.
4. An opportunity to realize potentialities for growth.
5. Teachers who are equipped to give specific instruction in health and to help youth mature emotionally.

An effect of these needs is shown by the fact that, in 1939, 37 states required by law that facilities for, and instruction in, physical activities be furnished in all public schools, and in half the states there is a director of such work in the state department of education.⁶

General objectives. The general objectives of physical education are threefold: (1) the development of maximum efficiency, (2) physical fitness, and (3) health. Physical fitness, as used here, does not mean that every youth should acquire a high degree of fitness comparable with that of an athlete or a member of the armed forces. This type, if developed, is usually not maintained more than a few weeks after the training period is over and is not necessary for the majority of people. Fitness, as used here, means that one should be physically able to engage in those activities incident to his type of work and his chosen form of recreation, as well as meeting emergencies which might arise calling for greater than normal exertion.

General principles in organizing a physical-education program. The physical-education program may be divided into three types of activities:

1. *Interschool.* These include contests between schools in various types of athletics, usually football, basketball, and track. Boxing, wrestling, and tennis are interschool sports in some schools.

⁴ Life Adjustment Education for Every Youth, U.S. Office of Education Bulletin 22, 1951, p. 70.

⁵ Health Needs of School-age Youth, *Bulletin of the Department of Secondary School Principals of the National Education Association*, 30 (April, 1946), pp. 50-65.

⁶ Rogers, *loc. cit.*

2. *Intramural*. The most helpful to the general student body are intramural, for these activities afford an opportunity for all students to take part. Types of activities include those for interschool contests as well as others less highly organized.

3. *Classwork*. Much instruction pertaining to games and sports, rules, safety, and other forms of related knowledge which pupils should acquire can be given in classwork.

Some general principles in organizing a physical-education program are:

1. All pupils of the school should participate in the physical-education program.

2. Activities of a low organization are to be preferred to those of high organization, for the former have greater carry-over value into afterschool life.

3. In small schools, especially, intramural sports should be substituted for interschool sports.

4. Activities should be selected of such a nature that a minimum of equipment is required for participation.

5. Pupils should be classified in all competitive events as nearly as possible according to age, height, and weight.

6. Sex segregation should be practiced only in such activities as gymnastics, stunts, and team sports. In other activities, children should not be segregated.

7. As far as possible, activities should be selected which will function out of school and in later life.

8. The school's program should be built with a knowledge of the community recreational facilities, which should be coordinated with those of the school.

9. Much health knowledge should be taught in the physical-education program, for many pupils violate health practices because of a lack of knowledge. If pupils are required to practice good health habits at school, the chances are greater they will practice them out of school.

Types of activities. At least three periods a week should be devoted to physical activities by every junior-high-school pupil, and at least two by every senior-high-school pupil. In order that all may participate, a wide variety of activities should be selected, mostly those of a low organization, that is, games and sports which may be played without a long period of coaching and in which teamwork is necessary but not so essential as in those of a high organization. Softball and volley-

ball are good examples of a low organization as contrasted with football, baseball, and basketball. A few other activities of a group nature are handball, touch football, soccer, folk dancing, and square dancing. Activities of an individual nature or those involving two or four only are tennis, boxing, wrestling, golf, track, archery, tumbling, gymnastics, swimming, badminton, croquet, horseshoes (quoits), shuffleboard, ping-pong, and squash.

Smaller schools should not try to engage in interschool athletic contests unless they have sufficient equipment and players and adequate coaching. Even in the larger schools, there is a tendency to reduce the number of interschool activities and stress intramural ones.

Equipment. Activities should also be selected with the necessary equipment in mind. Although desirable, well-equipped playgrounds and gymnasiums are not essential. The main aim is to get all to participate, and there are many activities which do not require elaborate equipment. One important essential is a playground for such games as softball, touch football, volleyball, and tennis. Especially in the Southern states, basketball is being played on outdoor courts. Many activities may be pursued in classrooms and halls. In classrooms equipped with tables and chairs, the tables may be utilized for ping-pong, or the floor may be cleared for rhythmic exercises. Hallways may be used for quoits, washers, shuffleboard, and marbles.

Classification of pupils. Pupils should be classified as homogeneously as possible with respect to age, height, weight, and physical condition. This will not only assure a greater amount of participation but will be a factor in preventing overexertion or injury.

In structure, there is a true sex difference, which includes differences in weight, height, and bone structure. These differences make it inadvisable that boys and girls participate together in certain gymnastics, stunts, and team sports but do not preclude many types of mixed group activities. Boys and girls live together in the home and are together socially, and if the school is to teach them to live together better, segregation will not do it. Segregation is not advised in rhythmic activities and in certain games of low organization in which sex differences are not a factor or in dual contests, as tennis and badminton.

Physical education as a part of the recreational program. One of the needs of all youth is recreation, and one of the functions of sec-

ondary education is to provide suitable recreational activities both for in-school and out-of-school life. Physical activities provide a major part of this program, but not all of it.

Recreation means re-creation. Regardless of the type of school activities in which pupils engage, they will become fatigued and bored. To overcome this, a change of activity is necessary. Phases of a recreational program should include all manner and variety of activities, such as free reading, browsing, social activities, clubs, rest periods, and the games and sports of a physical nature.

In order to be truly recreational, as much freedom as possible should be permitted in the selection of activities. Social grouping should be practiced. Competitive activities of a group nature with low organization but with rules to be enforced are more appealing to adolescents than such activities as marching and calisthenic exercises or those of an individual nature such as track. If activities are pursued to the point of extreme fatigue, more harm than good will result. Every school should be equipped with cots where individual pupils may rest when the need arises.

Mental hygiene through the physical-education program. One of the chief objectives of physical education is that of moral and character education. Good sportsmanship can well be developed through group contests by promoting teamwork, fair play, and wholehearted activity. Pupils should be taught that the most important outcomes are attained by "playing the game" rather than by winning. Social grouping of both sexes in rhythmic activities and competitive games in which the sexes are more equally matched will help develop healthy attitudes toward the opposite sex by centering the attention of both sexes on group activities.

Teaching health through the medium of science and the social studies. In schools organized on the subject basis, health should be taught through the medium of science and the social studies. Some of the specific topics of a health nature studied in science are:

1. The effect of narcotics on the body.
2. Balanced diets.
3. Securing pure food.
4. Sanitation and cleanliness of the body.
5. The importance of quarantine.
6. Vaccinations.

7. Common preventable diseases.
8. Pasteurized milk.
9. Patented medicines.
10. First aid.

Topics in the social studies pertaining to health deal primarily with social institutions for the promotion of health and sanitation. The emphasis in this study should be mainly on the development of attitudes, respects, and appreciations in order to secure cooperation and support in all civic enterprises pertaining to the betterment of community health. A few suggested topics are:

1. County and city health boards.
2. The hospital as a social institution.
3. Quarantine.
4. Socialized medicine.
5. Health inspection.
6. The drugstore.
7. Securing medical service.
8. State sanatoriums and clinics.
9. Health heroes.
10. The state's responsibility in public health.
11. Health and accident insurance.
12. The Red Cross and other organizations.

It is quite easy to integrate the study of health in the social studies and science by constructing units about the topics suggested in the two subjects. The only difference between the two is in the point of view. In biological sciences, emphasis is placed on the basic facts, knowledge, and skills necessary for an individual to know or acquire to be healthy; in the social studies, the same need is extended to the methods organized society employs to secure the same result. It matters little whether one teacher presents both points of view or two teachers do it; the factor of greatest importance is that both views be presented and that they be presented paralleling each other, in close succession, or in unison.

HOME ARTS

Any secondary-school curriculum based either wholly or partly on the needs of pupils cannot ignore the need for training both boys and

girls for home membership. The great majority of all girls, even though they enter industry or pursue a vocation directly after finishing school, eventually marry and become homemakers, and many are not adequately trained for such work. They are confronted with problems of cooking, sewing, marketing, budgeting, and child management and have had no previous experience or instruction in solving such problems.

The majority of the family income is spent by the housewife, and the majority of family incomes are so low that care and judgment are required to spend them wisely. Advertisers are doing all they can to cause people to purchase more than they need, and installment buying and charge accounts are great inducements to spending more than is earned.

Cooking and sewing were formerly taught in the home, but these arts have now been referred to the school in many cases. Interior decorating, home furnishings, exterior beautification, and child management are all essentials to homemaking. The large percentage of housewives do their own work, and even if help is employed, it must be directed and supervised.

Many phases of home-economics courses are being offered for boys, and such courses are becoming increasingly popular. Separate courses may be offered for boys and girls, or boys may attend the classes for girls. This practice should be encouraged.

A number of studies have given considerable attention to the needs of all youth for education for homemaking and for parenthood. Their major needs are:⁷

1. The ability to appreciate the importance of family life in our society.
2. An understanding of what good family life means in terms of their own experiences.
3. A desire to make their own family living as successful as possible by these standards.
4. The abilities and skills needed in successfully performing homemaking activities.

⁷ "Education for All American Youth," pp. 114-119, Educational Policies Committee, National Education Association, Washington, D.C., 1944; see also *Life Adjustment Education for Every Youth, U.S. Office of Education Bulletin 22, 1951*, p. 63.

5. A specific yet broad understanding of what the resources for family living are in their communities.
6. The ability to maintain democratic relationships in family life.
7. The ability to establish and maintain wholesome, effective family-community relations.
8. The ability to recognize and conserve values in family living as family patterns change.

Status of home-arts courses. Sewing and needlework were taught in public schools as early as 1798, but home arts as such made little progress until 1872, when Massachusetts legalized sewing and other industrial education, which is the basis for its claim to leadership in industrial education and household arts.⁸

The Federal government has done much to promote the teaching of household arts through legislation providing for extension work, the training of teachers, research, and aid in paying teachers' salaries in agriculture and home economics. The National Vocational Education Act of 1917 definitely recognized homemaking as a vocation for which definite instruction might be given in the public schools and which, as a vocation, could receive Federal aid. It was not considered the same as other vocational subjects with respect to methods, but it was considered advisable to prepare girls for homemaking, for the majority would be housewives or employed in households.⁹ The Smith-Hughes Act in 1917 and such subsequent acts for vocational education have all given national recognition to, and promoted instruction in, home economics. These acts have provided funds to the various states for the training of teachers and the paying of their salaries. The federally aided program does not reach all schools. Many schools which are not given Federal aid offer courses in home economics. Enrollments in such courses in junior high schools exceed enrollments in the senior division, and 53 per cent of the pupils are enrolled in classes which are not aided by the Federal government.¹⁰

⁸ Isabel Bevier, "Home Economics in Education," p. 141, J. B. Lippincott Company, Philadelphia, 1924.

⁹ Adelaide S. Baylor and Florence Fallgatter, Development and Trends in Home Economics Education, in "Objectives and Problems of Vocational Education," ed. by Edwin A. Lee, pp. 120-212, McGraw-Hill Book Company, Inc., New York, 1938.

¹⁰ Biennial Survey of Education, *op. cit.*, p. 22.

FINE ARTS

One of the main factors which differentiates man from lower forms of animal life is his mental life. The world could have been made with all the necessities of life for biological purposes without any music, painting, or poetry; but a world without these elements would reduce man to the level of a lower animal. These phases of man's life are given the general title of art; but art has other definitions. It has been defined as emotion, as creation, as a way of living, and as utility, that is, that which best serves the purpose for which it is made is a work of art.

Art in present-day society. The importance of art in modern life should not be underestimated. One comes in contact with art either as a producer or a consumer in every walk of life in practically every vocation, in social, recreational, and spiritual life. Art is no longer a luxury to be enjoyed and appreciated by a few only; it is now a necessity for all. There are several forms of art service needed in modern life:

1. *Art in Industry.* Practically every article which is manufactured in America must be artistically designed if it is accepted on the market. Clothing, tapestries, rugs, and draperies which formerly were designed abroad are now being produced in America. As a result of this development, a wide variety of vocations are now available in these fields. In household articles made for utility, modern design has taken the form of "streamlining," whether the article is a stove, refrigerator, iron, toaster, mechanical mixer, or dishwasher. The streamlining designs were borrowed from automobiles, which are constantly changing in line. Furniture styles, although influenced by old masters, call for much originality. Store-window decorating, billboard and magazine advertising, and interior decorating have become specialized fields.

The field of industrial arts is not confined wholly to the vocational, for it is practiced and enjoyed as a form of recreation. Arts and crafts in wood- and metalwork, turning, spinning cloth and metal, casting, modeling, and carving in plastics have found their way into millions of homes.

2. *Fine-arts Service.* The fine arts include painting, sculpture, and architecture. These have a place in life from the vocational aspects

in the production of paintings and engravings for decorative and ornamental purposes, in designs of buildings, and also as fields for recreation and pleasure. Educationally, these phases call for the development of skill in production for those who have talent and appreciation for all.

3. Social, Domestic, and Civic Service. The social, domestic, and civic service of art includes these phases of ordinary life: dress, home furnishings, beautification of lawns and homes, the preparation and serving of food, and the beautification of the community. Creating a civic pride and a consciousness of the bad effect of poorly kept lawns, streets, vacant lots, and old buildings as contrasted with what might be accomplished if they were properly planned and cared for is an objective in this phase of art education.

4. The Economic Service. The building of parks and the beautification of forests, lakes, rivers, and highways are important factors in preventing migrations and unrest and also in attracting tourists.

5. Art as a Means of Self-expression. Various forms of art are means of self-expression. They are a means of communication, for art expresses what words fail to convey. Any form of art may be employed: photography, painting with oil or water colors, designing, etching, printing, cutting wood or linoleum blocks, or employing the crafts in leather, metal, cloth, or paper.

Past status of art education. The first mention of art in public schools was by Franklin with reference to his academy, but little or nothing was done in the field until the first part of the nineteenth century. The instruction during this century was formal and geometric. By 1907, it had expanded to various forms of art, including drawing and crafts. An expansion of manual training, started about 1876, resulted in the teaching of industrial arts. From then on the fields have expanded to include crafts in wood and metal, etching, printing, carving, modeling, and work in plastics. Cooking and sewing, introduced at about the same time as industrial arts, have expanded to all forms of home arts, including purchasing, preparing, preserving, and serving foods; the selection of goods and designs; the construction of clothing; and interior decorating and furnishing. In 1948-49, about 48 per cent of all junior-high-school pupils, and about 10 per cent of senior-and regular-high-school pupils, were enrolled in art courses.¹¹

¹¹ *Ibid.*, p. 25.

Aims and objectives of art education. The objectives of art are for two types of courses: general art training for all pupils in secondary schools and more specific art training for those displaying special talents. The general courses are included in the general curriculum; the latter courses are electives.

Art in general education should put some emphasis on acquiring skills, especially for discovering those who possess talent and in furthering their skill, but greater emphasis should be placed on knowledge of art and on art appreciation. Those with interest and talent may develop their skills further in elective courses and in extra activities.

Art knowledge should include the importance of art in everyday life as in home building, decorating and furnishing homes, and selecting and making clothing. The vocational possibilities of art should be taught, as well as the art patterns and styles of other countries. Pupils should have some knowledge of outstanding artists and be able to identify some of their major works. Courses should include such phases of art as painting, drawing, sculpture, architecture, art in crafts, and art in advertising and in industry. An enriched program would permit pupils to follow special interests in general education.

Art-appreciation instruction should aim to develop good taste, and judgment and skill in making wise choices. Originality should be developed; pupils should learn to observe better and, with increased knowledge, to derive more pleasure and enjoyment from art.

It should be noted that in these objectives the major emphasis is upon consumption of art, rather than on skill in production. None of the specific objectives should stress the development of skill in drawing, painting, carving, modeling, etc., for these are incidental to the required general art course and are confined to the elective courses. In the general courses, pupils' talents are detected, and those with ability are given basic instruction in skills which may be developed further.

Integrating art in the curriculum. Art may be integrated in the curriculum either systematically or incidentally. The contributions of art to the curriculum organized about man's basic needs which may be coordinated with social studies, science, mathematics, and English are:

I. Food:

1. Preparing and serving food.
2. Decorating a table.
3. Art in china, glassware, and silverware.

4. Arranging flowers for decoration.
5. Art as utility.

II. Shelter:

1. Architecture of homes and public buildings.
2. Exterior decorations.
3. Interior decorations.
4. Clothes: patterns, colors, designs, texture.

III. Transportation and communication:

1. Art and its relation to utility.
2. Design in vehicles of transportation.
3. Art in books, records, letters.

IV. Spiritual, mental, and cultural life:

1. Art as recreation.
2. Art as culture.
3. Art influenced by religious motives.

MUSIC

Every pupil in the high school should experience some form of activity in music. There are two chief reasons for this requirement: (1) the increased amount of music in life generally, and (2) the recognition by educators that music is an important factor in developing and guiding the emotional life of youth.¹²

The first implies the social value of music. Because of improved methods of reproducing music, such as the radio, phonograph, and sound film, everyone, whether he resides in a rural or urban center, comes in contact with music. Most of these contacts will be made by the individual as a consumer, but there are many occasions when all are given opportunities or are invited or urged to take part in group singing at social, religious, and patriotic meetings. Taking part in group singing, playing in orchestras and bands, being a member of a chorus or choir are phases of production, while listening to music being thus produced involves consumption.

Music in the home has been popularized by the mass production of various types of musical instruments with prices so low that almost anyone can afford to purchase one.

The development of aesthetic tastes and the satisfaction of the

¹² Peter W. Dykema, "Music for Public School Administrators," pp. 1-2, Teachers College, Columbia University, New York, 1931.

aesthetic sense are important outcomes, for they contribute to the enrichment of life and have been included with man's basic needs. Some things cannot be expressed in words but must be felt, sensed, or expressed through some form of art, as music. In this respect, the consumption of music is a process of hearing what a composer has to tell. Interpretation of music, as a language, must be taught. Likewise, for a producer, music is a form of self-expression. It is a means of communicating feelings; it enriches life and adds significance to the events of life.

General objectives in music. In its broadcast sense, music contributes to the majority of the principles of education. It contributes to health by influencing the emotions, to the worthy use of leisure as a pre-occupation, and to ethical character. For a few, music has vocational benefits.

Dykema summarizes the contributions made by music under six heads: (1) physical, (2) emotional, (3) aesthetic, (4) social, (5) skill developing, and (6) intellectual.¹³

1. *Physical.* Since music is an art that is heard, it develops the sense of hearing and makes one more sensitive to sounds otherwise unobserved. Rhythm and tone are two elements of music which are employed in such activities as walking, dancing, talking and in operating certain machines, as, for example, typewriters.

2. *Emotional.* In music every tone embodies some emotional stirring, as danger, security, fear, anxiety, pleasure, sadness, strength, and weakness. One of the differences between types of music is the type of emotional response evoked. The better music stirs finer emotions of sympathy, kindness, exaltation, and courage and dissipates lower feelings.

3. *Aesthetic and Spiritual.* Although the aesthetic effects of music are closely related to the emotional, they differ in that the emotional responses result from association of the music to particular events of life, while the aesthetic effects are confined to the music itself.

4. *Social.* Music, like mathematics, is a universal language. Through music, common bonds of friendship may be established between the home, school, state, and nation. Through group music, the common bond of team participation creates unity.

¹³ *Ibid.*, pp. 3-8.

5. Skill Developing. The production of music is the result of human skill and is always a source of pleasure, regardless of whether the skill is of a high or lower order. Double satisfaction is secured when one combines the manipulation and skill with the product.

6. Intellectual. Music is the most abstract of the arts. It ranges in type from the most simple, which any child can interpret, to such a degree of complexity that only a high order of intelligence can interpret it. The performance of music requires thinking, concentration, and rhythm in order to coordinate the various activities required in production.

Content of music courses. There are three general fields into which all musical experiences may be divided, namely, the general music field, the applied music field, and the field of artistry. These fields involve singing, listening, playing upon musical instruments, and technical training.

General music is a term used to apply to that field of music which covers a specific body of music knowledge and experience which should be a part of every pupil's experience. It includes the appreciation of music, some music theory, singing, and ear training. This is the only phase which should be included in the general curriculum. The others should be offered as electives.

Appreciation is the most important of the four topics included in general music, for it involves the development of musical taste, the interpretation of music, and how to listen to and enjoy music. It is developed both by participation and by listening to good music.

Music theory is included, for pupils should have some knowledge of the symbols used in music, the various ways in which tones are produced, and what constitutes harmony, rhythm, and pitch. Such an understanding will aid greatly in developing an appreciation of music.

Group singing should constitute the major portion of the productive music in the required courses, for it is the one activity in which everyone will engage by being a member of a group which is singing.

In the junior high school, little technical training should be attempted in the required courses. The amount introduced in elective courses will depend entirely on the ability of the group. Ear training can be taught best by having pupils write music they hear; but if the pupils

do not display enough ability to do this, it should not be pursued to the point of stifling interest.

The specific objectives for the general music course are:

1. To give increased opportunity for the enjoyment of singing.
2. To raise the level of musical appreciation and melodic taste.
3. To develop a greater ability to understand music while listening to it.
4. To improve the pupils' knowledge of the symbols of music.
5. To orient the pupil into the field of music and its possibilities.
6. To acquaint the pupil with various types of musical instruments and the functional theories of tone production.

A few suggested activities designed to achieve these outcomes are group singing of well-known songs used most frequently by social groups, singing songs of other countries and songs for various occasions, listening to vocal and instrumental music on records and radio, examination of various types of musical instruments, and instruction in reading music.

Equipment. The amount of equipment needed is not great. A piano, radio, and phonograph should be standard equipment, and each pupil should be provided with some music book which is a collection of favorite songs. In small schools, where funds are limited, church hymnals have been borrowed for use in schoolwork. Although limited in the type of selections, they usually represent an excellent collection. The teacher should have many collections of suitable songs.

Suggested time allotment. Music should be required in all three grades of the junior high school and in the ninth grade of those schools organized on the 8-4 plan, which presupposes that music has been taught in the seventh and eighth grades of the elementary school. The time allotted to music should be about two periods a week. In addition, there should be one extra period a week for those who elect chorus and one or two periods for those who elect band and orchestra.¹⁴

Correlating music. General music instruction can easily be integrated with the total content of the curriculum, incidentally or systematically. Because of the nature of the contribution made by music, it is perhaps desirable that the integration be incidental rather than systematic. If the curriculum is organized by subjects or is unified, music should be correlated by coordination rather than by trying to

¹⁴ *Ibid.*, pp. 76-77.

unify or fuse it with the content of units. For example, in studying the history of the United States, the songs and music developed at certain periods may be reviewed, but it is doubtful that the class period should be broken by the groups singing these songs, or even listening to them produced on records. It is better if the music teacher, keeping herself informed of the units being studied in other courses, develops units in music about the same periods or develops units by themes which parallel the other units of the curriculum.

Some of the types of music that may be sung, played, or listened to which are related to units of work in other fields are:

1. *Folk Songs.* A folk song is a rhythmical ballad originating among the common people which is illustrative of their life, characteristic of their life, and characteristic of their racial or national spirit. Through the medium of this type of music, pupils can gain a better understanding of and an insight into the lives and character of people of other lands and other ages and periods which could not be gained in any other manner. Since many of the folk songs are the music for folk dances, the work in music and physical activities may easily be correlated.

2. *Patriotic Songs.* Patriotic songs are those which are characterized or influenced by the love of country. Behind each of these songs there is a story of conflict and struggle which can be related to the character of the times in which it was written.

3. *Hymns and Religious Music.* The religion and spiritual life of a people can be studied through their religious music, as hymns, Negro spirituals, religious dances and ceremonies, tribal prayers, and the music of temple worship.

Units may be built about these types of music, or they may be built about the music of various peoples, as the Negro, American Indian, and African tribes, or around the songs of other lands, as England, Germany, France, Russia, Spain.

History can be studied through the biographies of the lives of outstanding composers. English and music may be related by studying the words, usually in poetic form, of hymns, folk songs, ballads, art songs, school songs, and patriotic songs. Many of our most excellent poems have been put to music to be sung. Certain phases of science are related to music, for musical tones are produced through applications of the physical principles of vibrating strings, membranes, air

columns, rods, disks, and vocal cords and of percussions. Music is related to mathematics. It has even been defined as a series of mathematical ratios giving a pleasing effect and stirring the emotions. Time or rhythm in music is in terms of quantitative ratios; pitch is determined by the frequency of vibration of various vibrating mediums, and the laws governing the variations in pitch with concomitant variations in the tension of strings, and the length of vibrating strings and columns, are stated quantitatively, that is, in terms of formulas and ratios. Music leads one directly to the study of speech, sound waves, acoustics, sound pictures, and the principles of the radio and phonograph; or, conversely, a study of these instruments involving sound leads one directly into a study of the physical properties of music.

INDUSTRIAL ARTS

Industrial arts are closely related to homemaking or home-arts courses, for in the junior high school the major aim of both is worthy home membership rather than vocational training, unless one considers homemaking a vocation. The two fields pursued as electives in the senior high school are more definitely vocational, and the content becomes more specialized and technical.

Just as boys are pursuing courses in home economics, girls are gaining instruction in industrial arts for home rather than for vocational purposes. There are many crafts and skills in industrial education needed by both boys and girls, and girls have demonstrated their interest in this field. The course should include such activities as painting, varnishing, refinishing, gluing, and repairing furniture and upholstery; the making of simple pieces of furniture; simple electric wiring, repairing of leaking faucets, and the like—activities and experiences needed by everyone in a home.

In a survey made of 303 city intermediate and junior high schools reported by Edgerton, four major reasons were given for offering industrial activities and related studies, listed in order of frequency of reporting. They are:¹⁵

¹⁵ A. H. Edgerton, *Industrial Arts Education*, in "Objectives and Problems of Vocational Education," ed. by Edwin A. Lee, p. 300, McGraw-Hill Book Company, Inc., New York, 1938.

1. Contributing to general experience, all-around development, and consumer knowledge.
2. Aiding in the intelligent selection of occupations without encouraging early choices.
3. Enriching the school experience of pupils through concrete situations.
4. Preparing for entrance into and advancement in suitable vocations.

The first of these was mentioned 118 times by the 303 schools; the last only 6 times, which indicates that vocational education as a specific aim is not the general practice, but that background for making wise choices later and opportunity for exploration are considered worthy objectives for industrial-arts courses in the junior high school.

Past status of industrial arts. As was the case of fine arts and home economics, industrial education began receiving recognition in the latter half of the nineteenth century. The courses have had many names: "manual training," "sloyd," "shop crafts," and "general shop." Until recently, the courses were extremely rigid, technical, and logical, consisting almost wholly of projects selected, planned, and logically arranged, with specifications and drawings made by the teacher and assigned to the pupil, who had no choice or initiative in selecting exercises. The courses were uniform, including cabinetmaking, wood turning, patternmaking, foundry practice, forging, machine-shop work, and mechanical drawing. "These usually followed a logical arrangement of subject matter as well as an inflexible curriculum of prescribed projects. The teachers of these shop activities quite generally accepted prevailing attitude and practice of regimented education, and the so-called shopwork invariably stressed disciplinary experiences in the acquisition of tool skills."¹⁶

Objectives and activities of industrial arts. A distinction is usually made between the objectives of the courses offered in the junior high school for general educational purposes, exploration, home membership, and worthy use of leisure and those offered in the senior high school for vocational purposes. The industrial-arts courses contribute to three general objectives with corresponding specific objectives and activities as given by Edgerton:¹⁷

¹⁶ *Ibid.*, p. 283.

¹⁷ *Ibid.*, p. 288.

1. To provide general industrial experiences of common value to all pupils of whom required.
2. To offer exploratory activities to aid in revealing interests, aptitudes, and vocational possibilities for all concerned.
3. To develop an appreciation of design and quality in manufactured goods.
4. To offer opportunity for beginning specialized preparation for entrance into chosen industrial pursuits.

Frequently the major emphasis in industrial-arts programs is on the development of skills, with insufficient emphasis on understandings and appreciations. Not only should pupils acquire a knowledge of the particular tools and materials with which they work, but also of industrial processes, which should increase their appreciation of production and of methods. These aims can be acquired through the use of tools, through reading, by taking trips to industrial plants, and through motion pictures of the processes of changing raw materials into finished products.

Content of the industrial-arts courses. Industrial-arts courses can no longer be justified if the pupils merely make traditional objects out of wood and take them home as they did a few decades ago. Such activities have a place, but only in interpreting the culture of the past. Progressive-arts courses should help interpret a changing industrial order and present economic life. Activities should include as many industries as school shops and laboratories will permit. Students should be taught principles of production methods and how to identify important methods employed in industry. They should also study the sources and uses of materials.

There is some trend toward including arts and crafts in industrial-arts courses. Commonly taught skills include basketry, wood carving, sheet-metal molding, leather tooling, and work with plastics. Some of these, as wood carving and sheet-metal work, should be included, for they represent normal industrial-arts projects executed on a higher artistic level. For example, carving portions of objects made of wood such as a lamp base, or making a pewter or aluminum bowl, introduces a greater opportunity for developing artistic and creative ability than to make unadorned objects or those which have a utilitarian but no decorative or artistic value. The term "art" in industrial arts should not be con-

fined to the development of skills in the use of tools but should include opportunities for pupils to develop individuality and the ability to use materials and tools as a means of self-expression.

A sufficient number of activities should be provided for exploration so that all pupils will have an opportunity to become acquainted with their own abilities and determine what phases of industrial arts, if any, have any special interest for them.

Trends in industrial arts. Industrial arts has found a definite place in the secondary-school curriculum, not as a subject in formal discipline, as a place for those who were not doing well in academic courses, or as a course to prepare youth for a specific vocation. Its main values are more in the field of general education. It provides a place for exploration and guidance and practical situations for teaching many things which would otherwise be abstract or meaningless, such as safety and the use of tools, wood, metal, paints, glue, and varnish. The carry-over value of the course is great, for the knowledge, skills, and attitudes may easily be transferred to the home workshop, whether on the farm or in the city, as a hobby or for home and farm repairs; or it may carry over into some related vocation in which the pupil will advance more rapidly because of his previous training. Because of its general education value, it should provide credit for college entrance. Because of its excessive cost due to the large amount of equipment necessary, it should receive state and Federal aid and some state supervision. Because of its exploratory value, the teacher should be an educator and guidance counselor first and a craftsman second. For the same reason, industrial-arts teachers should keep in close contact with local industries and possible vocational avenues for all pupils and become well acquainted with the homes of the community in order that they may be in a position to guide and modify the curriculum in the light of the community and a knowledge of the educational and vocational intentions of the members of their classes.

Correlating the industrial arts with other subjects. Consumer education, safety education, and guidance are all contributions made in the industrial-arts course. It is one of the best places to teach certain phases of safety, for this may be taught as the need arises in the use of tools and machines. In addition to these topics, industrial arts may be correlated with the fine arts and mathematics. Activities in industrial arts are usually those involving the construction of articles and furniture

for the home, and they must be designed with artistic standards in mind. Some of the articles which will probably be made are stands, tables, stools, vases, bowls, picture frames, ash trays, and stands for flowers, which will be constructed of wood, metal, or plastics. Designs for these may be used for projects in arts courses.

Pupils will not proceed far in industrial arts before they experience a need for arithmetic, especially common fractions. Accurate measurement is essential for good work, and practically all measurements of drills, bits, taps, dies, screws, bolts, and gages of thickness of metals involve fractions. Through cooperation, the industrial-arts and mathematics teachers can increase the pupils' fundamental skills in arithmetic.

SAFETY EDUCATION

Training youth to safeguard their own lives is not a new idea as an objective either of society or of the school. Self-preservation has always been a major aim of individuals and a primary reason for co-operation of groups of individuals. In former times, the majority of this training was conducted in the home and learned through experience by each individual. Evidence that the individual had learned to look after himself was found in his own survival.

Society as a group or the state has, as the need arose, aided the individual in self-preservation. Speed laws have been passed and partially enforced; road signs indicating curves, narrow roads, and crossings have been erected; traffic signals have been installed; streets are required to be cleaned and freed from ice; homes are required to be constructed in congested areas according to municipal or state safety regulations; natural gas has been given an odor so that it can be detected, and alcohol for external use has been denatured with a nauseating substance, as well as a bad-tasting one, so that it is likely not to be taken inwardly. But in spite of all these efforts of society, preventable accidents have increased to enormous proportions.

A few agencies have made beginnings in educating the public to avoid accidents. The bulletins and pamphlets of life-insurance companies, safety talks, films, posters, and bulletins of state highway departments and public schools are types of materials used in this work.

The school's responsibility for safety education. The chief issues in safety education are not that accidents occur, or whether they are

preventable or not. The questions are, What is the school's responsibility for teaching safety? What phases of safety education can be taught in public schools? And how can they be taught?

In answering these questions, it must be recalled that educational aims are aims of society which have been selected by the school, are capable of being met by the school, are capable of being learned by the pupils, and are not being adequately met by other agencies and that they must represent the aims of society as a whole. The school can teach many facts, habits, skills, and attitudes which will be instrumental in reducing preventable accidents; pupils are capable of learning them; society as a whole is confronted with the problem, as evidenced by the publicity the subject is receiving and by the fact that a number of states have made such instruction mandatory. No agency has adequately met the objective. Quite definitely, part of it is taught, and in many courses, especially science, some phases of safety have been taught for years. If the school accepts the responsibility, from the standpoint of society the problem is solved, for as soon as people refer it to the schools they will cease to help solve the problem and complain about the poor results obtained by the school.

It is doubtful that much safety education can be taught for the future, for times change so rapidly that unless one is able to adapt himself to such changes many specific skills valuable at one period will not function at another. Some facts and skills, however, will be of value later. Electricity will always be employed for various purposes, and the fact that a direct contact in the circuit of 110 volts may kill one or cause injury will not change. The great need is for training for the present, for if one learns to protect himself at the present time, many skills, habits, and facts will be valuable later, and he will live to learn how to protect himself in the future.

Safety education involves everyone, at all ages. It is a continuous program and to be adequately treated should involve the cooperative efforts of all agencies engaged in the work. State highway departments have already shown their willingness in cooperating with the schools, in giving talks, in showing films, and in sponsoring and training boys' patrols for watching dangerous intersections while children are crossing streets.

The scope of safety education. The field includes safety and self-preservation in any and all activities of life: in leisure-time pursuits,

in school, in the home, on the highway, and in vocational activities. There is no place where there are no possibilities for an accident if a human being is present. Therefore the program should cover safety in all activities.

The objectives of safety education. Some of the specific objectives of safety education are:

1. To teach pupils to take an active interest in the protection of the life, health, and property of the community in which they live.
2. To bring about an appreciation of the responsibility of the individual for the safety of others with whom he is associated.
3. To develop cooperation in the solution of such safety problems as traffic hazards, safe driving, and fire prevention.
4. To create a respect for and an understanding of safety rules, regulations, laws, and practices.
5. To understand the common causes of accidents and how accidents may be prevented.
6. To develop knowledges and skills applicable to all traffic situations involving pedestrian responsibilities, bicycle riding, and automobile riding and driving, and to develop courtesy on the highway.
7. To develop appreciations of occupational hazards and skills in minimizing the hazards.
8. To develop knowledges and skills which may be applied to such emergency health problems as wounds, suffocation, poisoning, fractures, dislocations, and burns.

The school will have little difficulty in giving instruction in factual material, and although they are difficult to teach, it has the facilities and means of developing attitudes and appreciations. But it is very difficult to teach habits and skills unless pupils are placed in actual situations involving them. This may be done in many phases in courses in science, home and industrial arts, and physical education but is more difficult with respect to such skills as driving a car. This skill must usually be taught in actual situations in cars—a type of instruction which is being given in many schools.

Organization for safety instruction. The types of safety-education programs which have been developed in secondary schools may be classified under four headings: ¹⁸

¹⁸ "Safety Education," p. 105, Eighteenth Yearbook of the American Association of School Administrators, Washington, D.C., 1940.

1. Correlating and integrating safety with many different subjects and activities.
2. Teaching safety as a separate and distinct unit included in other subjects.
3. Organizing safety education as a separate subject.
4. Centering a safety-education program around pupil organizations and special projects of various types.

Of these various plans which are not mutually exclusive, units integrated with other subjects and activities are to be preferred in the elementary school and junior high school, while separate courses in safety are gaining in favor in the senior high school. In 1949, safety education was reported as being taught as a separate subject in 46 states, and 4 per cent of all pupils were enrolled in it. Driver education is now taught in every state, and 4 per cent of all pupils are receiving driver education.¹⁹

There are several reasons why safety education should not be offered as a separate course in the early high-school grades. No single subject covers the field, and to organize one would be isolating phases of various subjects into an independent unity separated from its more natural setting and context. Such subjects as science, physical education, industrial arts, the social studies, and mathematics all make contributions. If phases of these were placed in one course, all pupils would not come in contact with them unless it were required, and already the required content is well filled. There would also be the factor of finding a teacher qualified to teach safety in all its aspects. In various subjects, units may be built on safety education, or in a unified curriculum a single unit may be constructed in which various subjects make contributions; but, over and above these units, teachers should never miss opportunities to present safety implications. Most safety should be taught as the need arises, such as teaching safety about tools and machines while working with them in industrial arts, about cooking ranges while actually engaged in cooking, and about poisons while dealing with chemicals. Furthermore, to organize the materials of safety education into one course or one unit would tend to place the total responsibility for such instruction on one teacher.

Contributions of various subjects to safety education. Safety education in various courses should not be wholly incidental but a planned

¹⁹ Biennial Survey of Education, *op. cit.*, p. 25.

and primary part of each subject. The specific places and phases of various courses involving safety are:

1. *Physical Education.* Instruction can be given in safety in swimming, in safeguarding pupils in the gymnasium and in sports and contests, and in proper first-aid treatment of sprains, bruises, cuts, and fractures.

2. *Sciences.* Instruction can be given in safety with regard to the following: fires, poison gases, poisons taken inwardly, poisons to the skin, electric shocks and burns, driving and walking in traffic, explosives, fireworks, inflammable cleaning fluids, firearms, electric storms, the effect of narcotics on ability to drive, swimming, and bites from insects, snakes, and other animals.

3. *Household Arts.* Instruction can be given in safety about the home, in cooking, dry cleaning, and child care.

4. *Industrial Arts.* Instruction can be given in safety in the use of tools, machines, and electricity.

5. *Social Studies.* Instruction can be given in how society has co-operated in safety with regard to the following: forest fires, fires in homes, fire departments, traffic policemen, state highway patrols, lifeguards at swimming pools and lakes, building standards, ordinances and laws pertaining to safety, and accident insurance.

6. *Mathematics.* Problems and exercises in mathematics can be built about accidents from various causes, economic losses from accidents, the graphical representation of accident causes, the cost of accident insurance, computing probabilities of accidents, the stopping distance for various speeds, reaction times of drivers, and the relation between speed and kinetic energy.

If the instruction in safety is coordinated following the scheme of coordination about units based on fundamental needs, the subject matter would be grouped as follows:

1. Securing food and raw materials: accidents and safety in mines, forests, farms, mills, and factories.
2. Shelter: accidents and safety in the home and safeguards in constructing and maintaining homes.
3. Transportation: safety on the highway, on water, in the air, on trains, walking, or horseback riding.
4. Communication: vocational accidents of groups engaged in communication services.

5. Cooperation: how society has cooperated for safety in public services, legislation, police and fire departments, and insurance.

6. Spiritual, mental, and cultural life: safety in recreation, sports, hobbies, social activities, camping, and hiking.

CONSUMER EDUCATION

Democratizing secondary education has brought a shift in emphasis from the producer to the consumer. This is evidenced especially in the fields of art and music, and to some extent in other subjects. As a result of mass production, the wide distribution of goods, and keen economic competition, attention has been turned to the training of economic intelligence. This is one of the primary aims of the home-arts courses, for a majority of family budgets are spent by housewives. Consumer education should be extended to all pupils of the school, for other subjects such as science, social studies, mathematics, and industrial arts make contributions. As in safety education, there should be no separate course organized for this work, but economic intelligence should be developed through all courses that make contributions.

Need for consumer education. The need for such training is evidenced by the large amount of unwise buying by those who have had little or no training in making purchases. High-pressure advertising is designed to cause consumers to buy what they do not need, to buy more than they need, and to change models more often than necessary. The techniques employed by advertising agencies are an appeal to pride, vanity, and the desire for popularity and are designed to create fears of insecurity, loss of position, and death. Advantage is taken of ignorance; pseudoscientific methods are employed which make detection of false statements difficult; and there is a constant attempt to make consumers dissatisfied with their possessions by changing models frequently. Universal use is made of installment purchases carrying high interest rates. Being able to pay a small sum when the purchase is made and to pay the balance later is a strong temptation for consumers to make purchases they cannot afford.

Competition has resulted in mass production in order to lower the cost, in a lowered quality of goods, and in a market flooded with imitations. Trade names which once assured one of a high quality no longer offer any such guarantee; descriptive literature is often misleading.

Advertisements overestimate, make use of a false science, and make statements which cannot be verified, and salesmen cannot always be relied upon to give a true representation of goods. The consumer is certainly in a dilemma when he attempts to get his money's worth or to purchase what he wishes to purchase.

Several agencies have undertaken the task of developing economic intelligence. Among these are such groups as the Consumers' Council of the Agricultural Adjustment Administration, the National Association of Manufacturers, the National Association of Better Business Bureaus, Consumers Research, Consumers Union, Consumers' Guide, and Good Housekeeping Institute. Likewise there are several books devoted to the subject.²⁰ These have all been of service and have reached many people, but the best agency is the school. Through the medium of various subjects, many facts can be learned, habits and skills acquired, and attitudes developed which will be of both present and future value in purchasing and consuming.

Objectives of consumer education. The general objective of consumer education is to develop an economic intelligence so that pupils may make purchases, consume various commodities more efficiently, and apportion the expenditure of their incomes for the best interests of themselves and others. Becker states the general objectives of consumer education in five outcomes to be achieved: ²¹

1. To develop an awareness of consumer problems.
2. To develop a scientific and critical attitude toward the various sales appeals.
3. To become familiar with agencies and sources of information helpful to the consumer.
4. To provide experiences to improve the ability of students to make rational choices.
5. To make students realize that consumers must organize.

Some specific objectives of consumer education are:

I. Factual information:

1. Knowledge of the methods employed by advertisers to stimulate buying.

²⁰ For a bibliography on consumer education see Jessie Graham and Lloyd L. Jones, "The Consumer's Economic Life," pp. 535-543, Gregg Publishing Division, McGraw-Hill Book Company, Inc., New York, 1946.

²¹ Harry A. Becker, Methods and Pitfalls in Consumer Education, *Clearing House*, 14 (October, 1939), p. 75.

2. Knowledge of the rates of interest charged on purchases made on the delayed payment plan.
3. Knowledge of various types of cloth, wood, metal, dyes, etc., and their uses in different articles as to wearing ability, durability, and permanence.
4. Knowledge of various consumer aids and how to use them.

II. Skills, habits, and abilities:

1. Ability to operate gas, electric, oil, and coal furnaces, ranges, and appliances as economically and efficiently as possible.
2. Ability to detect the difference between genuine articles and substitutes.
3. Ability to detect flaws and defects in commodities.
4. Habits of inspecting articles and applying any known skills before purchasing.
5. Ability to judge the value of articles and to determine quality.
6. Ability and habits of critically analyzing advertisements and sales talks.

III. Attitudes:

1. Development of a skeptical attitude toward all highly advertised articles.
2. Development of a sales resistance.

Areas in consumer education. Areas that should be covered in consumer education are.²²

1. Consumer choice making—choosing among various types, qualities, and styles of commodities.
2. Consumer income management—management and distribution of income by budgeting so as to assure appropriate proportionate expenditures.
3. Buying, consuming, and using commodities so as to assure maximum quality and efficiency at minimum cost economy.
4. The economic order and consumer welfare, general economic problems, legal protection to the consumer, cooperative enterprises in marketing, and credit unions.

Integration of consumer education in the curriculum. Perhaps the courses in home arts make the greatest contribution in intelligent buying, for in these courses there is an opportunity to gain firsthand information in purchasing groceries, meat, canned goods, clothes, and furnishings. Modern home-arts laboratories are equipped with electric, gas, oil, and wood ranges on which pupils not only learn to prepare

²² Some Principles of Consumer Education at the Secondary Level, U.S. Office of Education Pamphlet 94, 1942, pp. 7-9.

food but to consume the fuels used in them economically, efficiently, and safely.

In science, many of these same skills and habits are taught, and, in addition, pupils may be taught to identify many articles or to detect the difference between genuine articles and substitutes, to have a critical attitude toward exaggerated claims for patented medicines and other commodities, to detect the false statements in advertisements, to purchase fuels with efficiency, and to develop, if possible, sales resistance. Many science classes analyze the contents of mouthwashes, tooth pastes, and shaving lotions to determine the quality and quantity of the advertised contents.

The social-studies courses may include a study of organized attempts to aid the consumer, such as interstate commerce laws and inspection by the government, consumer aids, and advertising agencies and their methods.

In mathematics, many problems may be constructed about installment buying, the amounts saved by large rather than small purchases, the computation of the volumes of different sizes of cans, and the comparative costs of goods in each size.

Pupils should be taught to identify the most common types of woods and their merits in furniture and home building and to determine the quality of tools, paints, varnishes, roofing materials, and electrical appliances.

CONSERVATION OF NATURAL RESOURCES

Rugged individualism has been responsible for the waste and exploitation of natural resources. Social attitudes are coming to the rescue. The depletion of soil, the cutting of forests, the mining of minerals have proceeded so rapidly that society is becoming conscious of the fact that the next generation should be considered and that the present one is depleting resources faster than they can be replaced. The chief outcome to be achieved from a study of conservation in our schools is the development of social rather than individual attitudes with respect to natural resources. This is taught through the medium of factual materials concerning our natural wealth, its exploitation, and proper methods of conserving it. This is a unit designed mostly for the good of society and has more future than immediate value.

Conservation should be taught through social studies and natural sciences rather than through a separate course. The two subjects attack the problem from two points of view. The natural sciences stress the physical occurrence and formation of natural resources and the agencies of their destruction and protection. The social studies consider the development of social agencies and social attitudes for their protection. The particular topics considered are soil and erosion; forests and their destruction by man, insects, and fire; minerals, as coal, oil, and gas; wild game and game preserves; floods and flood control, or the storing of water for use in arid lands.

CORRELATING FREE ACTIVITIES

Regardless of the type of organization of the curriculum, whether it is along conventional lines or progressive lines, free activities should be correlated with the regular curriculum. Formerly all nonacademic activities were considered extra, but all activities are now considered as a legitimate and essential part of the curriculum.

Activities are of six types: (1) clubs, (2) student publications, (3) student participation in school government, (4) dramatics and debate, (5) athletics, and (6) assemblies.

Purposes of activities. The purposes served by the activities program are to give pupils an opportunity to engage in additional activities in which they have become interested during their academic work and to explore further various avenues of vocational or avocational pursuits. Activities are a part of school life and should contribute to the regular aims and functions of secondary education as do all other activities, courses, and experiences.

The chief purpose of activities should be to enrich the academic phases of the curriculum. Activities enrich by furnishing needed experiences which transform facts into knowledge, by furnishing actual rather than vicarious experiences, and by furnishing an outlet for self-expression, group participation, and freedom to engage in activities not required by teachers. If pupils participate in school government, they have an opportunity to live in and practice democracy, which is the only way it can be taught. Finally, activities enrich all school life and help pupils become adjusted, happy, and contented, which results in motivating all schoolwork.

Typical activities which enrich various subjects. Activities may be grouped according to the subject which they enrich or from which they emanate.

English. The activities which enrich English courses may be divided into clubs, student publications, and assemblies. Through these types of activities, the work is vitalized. They help pupils transfer the work of one field to that of another and illustrate generalizations learned in formal instruction.

The clubs may be organized about special phases of English, such as poetry, writing, dramatics, storytelling, book reviewing, debating, or a study of authors.

Publications offer an opportunity for pupils to publish what they have written, to collect and edit current school happenings, and to express their opinions on school policies, activities, and school life in general.

Assemblies offer an opportunity for pupils to engage in public speaking of various types, present dramatic productions, debate, give book reviews, and deliver an organized presentation of some topic.

Through these activities, the work of English can be correlated with other subjects. The best questions for debate are those from the social studies; journalism requires the study of journalistic style, which necessitates the reading of editorials and current papers; and parliamentary procedure may be learned for use in formal meetings.

The Social Studies. The activities related to the social studies are debates, participation in student government, and open forums.

Debating, which is a form of public speaking, brings the social studies and English fields together: the one furnishes content, the other the art of public speaking.

Student participation in school government, usually practiced through a student senate, is a form of democracy in practice. Representatives from each class or grade, taken collectively, compose the student senate. Their activities are cooperative and policy-forming rather than administrative.

Forums are becoming popular as a place in which to discuss current social, economic, national, and international problems. In the open forum, if conducted properly, the feeling of restraint which often pervades the regular class periods is removed, and pupils feel free to express themselves on current problems. The value of pupil discus-

sions is no greater than their knowledge of the topics being discussed. Knowledge should be gained first in other subjects. Since most current topics and problems transcend subject divisions, the school is again provided with a scheme for integrating subject matter. If teachers cooperate in planning the problems for the forums, these can be made to parallel the subject matter being pursued in various courses.

Science. Since studies and investigations have shown that demonstration is about as effective as individual laboratory work, it has, to a great extent, been replaced by teacher demonstrations. This results in a saving in time and equipment but does not give pupils a chance to acquire any skills in the manipulation of scientific apparatus, nor does the method give the pupils a chance to "feel" the materials, which is essential to gaining knowledge. Activities emerging from science give this opportunity in the form of science clubs. These may be divided into such separate units as hobbies, electricity, photography, microscopy, bird study, and astronomy.

Other Subjects. Music, art, athletics, home and industrial arts are all forms of activities themselves; that is, they are not ideational subjects and are conducted by the laboratory type of method. This reduces the necessity of having to enrich the course by additional activities, although additional ones are not precluded. Art and music clubs may be organized and easily correlated with other subjects. Photography is a form of art, involving mathematics and science, and a full knowledge of musical instruments requires a knowledge of physics.

Home arts and agriculture, being related, may be enriched by garden, flower, canning, sewing, and interior-decorating clubs.

Athletics is a part of the physical-education program and should be sponsored and supervised by the physical-education teacher.

Integrating and culminating activities. There are several types of activities which serve to integrate the work of the entire school, such as programs presented to the public. Typical of these are "patron's day" programs, operettas, and commencements. These activities should be of such a nature that the work of the entire school is involved. The music department can provide for singing, and music is rendered by the orchestra or band. The English departments should handle such phases as dramatics, talks, debates, or readings, as well as the publicity through school papers and the local press. The arts department may make contributions through stage settings, decorations, and costumes,

while the science and industrial-arts departments contribute to stage properties and lighting.

School contests. It is not necessary to motivate activities through interschool contests. These have often been carried to such extremes that the general training of all has been neglected for the specific training of a few in order to win honors from another school.

The secondary-school fraternity. Out-of-school activities which are associated with but not supervised by the school, such as the high-school fraternity, are not desirable. They can best be discouraged by an enriched activities program rather than by an attempt to prohibit them directly.

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THE CURRICULUM—SPECIAL INTERESTS: ACADEMIC

More has been said than done about individual variations among high-school pupils. Ever since the high-school population started expanding, educators have studied the extent of the variations and psychologists the causes. It is only recently that the third aspect has been emphasized, that is: What can the school and teachers do about these variations? The placing of emphasis upon the first two aspects has been one of the retarding factors in making adequate provision for individual differences, while the rapid growth of the school population accentuated the problem of adapting a curriculum to the varying needs, abilities, and interests of all pupils. Of necessity, group instruction must be employed in public schools, and although individual differences do not preclude group instruction, they do require that techniques be suited to a heterogeneous rather than a homogeneous group such as once attended the secondary schools. Phases of the public-school system causing individual personalities to be submerged have been a single curriculum with few or no electives, traditional courses, and the textbook method of instruction with little or no use of collateral material.

Of the three main divisions of a study of individual differences—the causes, the extent of, and provision for—the first two should receive less treatment than the latter. Whatever the causes are, many have operated before pupils reach the secondary school, and the fact that they exist is well-known. The extent of the differences becomes obvious to anyone dealing with school pupils, but what to do about them is a most perplexing problem.

THE CAUSES OF INDIVIDUAL DIFFERENCES

The major causes of individual differences have been grouped under the following classes:

1. Heredity, sometimes referred to as nature or ancestry.
2. Environment or nurture.
3. Race and nationality.
4. Sex.
5. Age and maturation.
6. Endocrine glands.

Differences due to heredity and environment. Often in the age-old argument about the relative effectiveness of heredity and environment as causes of individual variations, all traits were considered as a whole rather than as specific separate factors. It was not uncommon also to find extremists, or those who argued that one or the other was completely responsible for individual traits. A more modern view of the subject is that both are responsible for differences and that, while heredity may be more of a cause of one trait, environment may have a greater influence in producing variations in others. The characteristics or traits with which the educative process is concerned are intelligence or native capacity, either of a general or specific nature, special aptitudes, moral traits, personality, interests, and emotional characteristics.

General intelligence. Intelligence has been defined as ability to make adaptations to environment, ability to make adaptations to new and novel situations, and, for school pupils, ability to learn. Educators are concerned with the causes of native intellectual endowment in order to determine the extent to which mental traits are subject to training and the stability of the intelligence quotient. Many methods have been employed in an effort to determine the relative effectiveness of nature and nurture on intelligence. Some of these attacks are made by a comparison of individuals with their ancestors, or family resemblances. A second line of attack studies mentality and its relation to early opportunity. It uses such factors as resemblances of foster children to each other, to their foster parents, and to their real parents; the relationship of mentality to occupational groups; repeated testing of selected and unselected groups; the effect of training on individual

differences; and a comparison of identical and nonidentical twins reared together for a part of their lives and reared apart for a period. Investigations employing these techniques are still in progress, and so far only tentative conclusions have been drawn. The following are some tentative conclusions based on available evidence:

1. Both heredity and environment influence individual traits. No definite ratio expressing the relative influence of heredity and environment has been established and perhaps none ever will be, for the two factors are inseparable. Environment makes the measurement of hereditary traits possible. A ratio was suggested by Newman, Freeman, and Holzinger, attributing about 25 to 30 per cent of the variance of fraternal twins reared together to the influence of environment and the rest to heredity. This was tentative only and based on several assumptions.¹
2. Environment is more effective in producing differences in some traits than in others. It affects physical traits least, intelligence more, educational achievement still more, and personality and temperament the most.²
3. Mental growth, as measured by intelligence-test scores converted into mental ages, is strikingly regular and orderly, although there are individual differences in rate and character of the growth.³
4. With unselected groups of school children, the rate of mental growth as measured by the I.Q. is relatively constant; that is, there is a tendency for individuals to maintain the same relative position with respect to the group with which they were measured. Repeated testings, whether a few days or a few years apart, give coefficients of correlation averaging from .80 to .90, while one-half of the cases tested varied only five or six points from their original scores.⁴ Evidence is contradictory with respect to whether I.Q.'s increase or decrease with age. Burks, Jensen, and Terman in a study of selected superior children report that they showed a general loss of I.Q. when tests were given six years apart,⁵ while Cattell found a definite tendency for pupils of high intelligence to gain as they become

¹ H. H. Newman, Frank N. Freeman, and Karl J. Holzinger, "Twins, A Study of Heredity and Environment," p. 354, University of Chicago Press, Chicago, 1937.

² *Ibid.*, p. 353.

³ Frank N. Freeman, "Individual Differences," p. 251, Henry Holt and Company, Inc., New York, 1934.

⁴ Claude L. Nemzek, The Constancy of the I.Q., *Psychological Bulletin*, 30 (February, 1933), pp. 143-168.

⁵ B. S. Burks, D. W. Jensen, and L. M. Terman, "Genetic Studies of Genius," Vol. III, Chap. III, Stanford University Press, Stanford, Calif., 1930.

older.⁶ Superior children show more variations than average children, but they maintain their high relative positions as they increase in age.

Studies have shown that statements like the following concerning the I.Q. are no longer accepted without question:

1. The I.Q. is constant in narrow margins.
2. One can predict at the age of 6 what I.Q. one will have at 16.
3. Heredity is a force dwarfing all others in its influence on mental ability.⁷

It must be recalled that such conclusions are tentative and relate to children under high-school age, and most of them to pre-school children. Intelligence tests before the age of six have large errors of measurement and also large errors of estimate for future predictions. Furthermore, marked changes in the I.Q. do not occur unless there are pronounced and continuous changes in the home environment.⁸ Unless marked changes occur in school, comparable changes in the I.Q. should not be expected, and since the I.Q. becomes more stable with maturity, such changes are not likely to occur in high school.

These conclusions indicate that mental abilities are stable enough so that one can feel confident that a superior pupil, on entering high school, will be superior when he finishes and one who is inferior will remain so. There is no evidence that high-school training will make a superior pupil from one below normal. In retesting with intelligence tests, one finds fluctuations, but many have been traced to personality and emotional factors operating at the time of the test, to language handicaps, inattention, inability to understand the instructions, and to a lack of reliability or even validity of the test used. Many persons prefer to give three intelligence tests close together and test once a year in order to get as accurate a measurement as possible. For those who cannot afford so frequent a testing program, no injustice will befall an individual if he is guided on the basis of tests given less frequently, especially if teachers use their own judgment as to his ability and if factors other than intelligence are considered.

⁶ Psyche Cattell, Constant Changes in the Stanford-Binet I.Q., *Journal of Educational Psychology*, 22 (October, 1931), pp. 544-550.

⁷ Editorial comment, *Educational Method*, 19 (November, 1939), pp. 118-119.

⁸ Paul Witty, Toward a Reconstruction of the Concept of Intelligence, *Educational Method*, 19 (November, 1939), pp. 63-72.

Special aptitudes. What has been said about general intelligence holds true for specific traits such as musical, artistic, mechanical, linguistic, motor, and mathematical abilities. Although affected by training, they are stable enough so that one can predict future capacity by present capacity, and one need have no fear of beginning training on some aptitude at an early age. There will be an apparent improvement with training, and one with less innate capacity, with training, may surpass one with greater capacity and less training. Although nature sets the limits beyond which one may not be trained, the limits are broad.

Other traits. Other characteristics, as moral and emotional traits, interests, and personality, although affected somewhat by native endowment, are due mostly to environment and are subject to training. There is no such thing as being born dishonest, for those who are dishonest either have not been taught respect for ownership or have even been taught to lie and steal. Emotional stability develops with age and experience, and personality changes and development may be materially altered in a few years by means of persistent efforts and application. One may possibly inherit a tendency to emotional stability or the opposite, but the evidence seems clear that much that happens to pupils in this respect is acquired.

Differences due to sex. It is only within the last few years that girls and boys have been treated nearly alike in secondary schools. A few centuries ago, girls were denied a secondary education. A few generations ago, their training, especially in girls' schools, was quite distinct from that of boys. In the modern high school, boys and girls are found together in practically every subject and activity. One of the causes of this difference in treatment was the belief that girls were inferior to boys in mentality and that heredity, rather than environment, accounted for a difference in many special abilities and interests. Since the appearance of more exact methods of measuring traits and abilities and the development of a scientific approach to the solution of educational problems, many popular beliefs based on speculation and opinion have been proved false. A few conclusions based on studies of sex differences are as follows:

1. The supposed difference between the sexes in mental ability has not been demonstrated, for, on the contrary, the sexes appear to be about equal in general mental ability. Many studies show that there are more boys

than girls at the extremes of the distributions of various measurements, but this is not definitely established, and the overlapping is almost complete.⁹

2. There is little objective evidence, but a common view among psychologists, that there are sex differences in personality, temperament, and interests, perhaps due to endocrine glandular differences.¹⁰

3. There is a small but consistent superiority of girls over boys in general linguistic ability.¹¹

4. Evidence favors boys in most tests involving numbers.

5. Girls do better in memory work.

6. Boys surpass girls in mechanical ability. How much of this is innate is not known, but environment produces much of the difference.

7. There is a sex difference in interests in reading and in observation of specific objects and things in the environment.¹²

On the whole, sex differences are compensating, and for every one in favor of boys one can usually find one in favor of girls. When one considers total scores on tests, there are no significant differences. It is only on the parts that differences are revealed. As far as the school curriculum is concerned, no special differences need be shown save in a few subjects. In home economics, girls usually meet together; in shop and mechanical arts, boys meet together. Schools which have offered courses in home economics for boys found that they learned certain phases of home arts as well as girls and that they were interested. The same is true of girls taking manual arts. In physical education, girls cannot compete with boys, especially in such organized sports as football, basketball, and baseball, or in track. In other respects, differences within either sex are much greater than differences between them, and they may be neglected.

Differences due to race and nationality. There is a difference in test scores made by groups of different races and nationalities, but whether they are due to any genetic causes or to environment has not been established. Tests given in the United States to school children of different races and nationalities show that there are differences between them. Some of the reasons for the differences are the selective factor of those migrating to the United States, environmental differ-

⁹ Freeman, *op. cit.*, p. 213.

¹⁰ *Ibid.*, p. 217.

¹¹ E. A. Lincoln, "Sex Differences in the Growth of American School Children," pp. 43ff., Warwick and York Incorporated, Baltimore, 1927.

¹² Freeman, *op. cit.*, pp. 203-211.

ences, and language difficulties in taking the tests or in doing school-work.

Educationally, there is much overlapping of abilities between groups of different races and nationalities. This means that differences within groups are greater than between them and that distinctions need not be made on the basis of ability to learn. Superior and inferior individuals may be found among all races and nationalities, and the effective intelligence of any individual may be raised through education.

Differences due to age and maturity. Mental functions begin their development with infancy and continue to grow until maturity. They develop concomitantly; that is, the growth of each trait parallels that of others. Traits do not develop at the same rate, nor do they necessarily reach their maturity at the same time.

Most traits reach their maximum growth in the late teens, or, at least, the yearly increments are so slight after that time that they are difficult to measure. No one knows just when growth really stops and decline begins. Ability to learn, however, improves far beyond the teens because of the accumulated effects of past learning, improved efficiency, and experience.

There are two causes of differences due to age: (1) the factor of the maturation of mental traits, and (2) increased chronological age, bringing increased and varied experiences. Age cannot be neglected as a factor in the secondary school. Gradual changes should be introduced in methods of discipline, techniques, school government, and especially in the curriculum. Grade placement of certain topics is very important, for it may determine whether or not pupils will understand the material or develop an interest in or a distaste for it.

There is no definite age when one trait should be trained more than others, but all should be trained as they develop. For example, there was a former belief that one memorized better before puberty and reasoned better afterward. Actually, memory and reasoning ability, together with other traits, are present at birth and develop together.

THE EXTENT OF INDIVIDUAL DIFFERENCES

All are conscious of and aware of physical variations and differences among people with respect to height, weight, shape, proportions, skin color and texture, and color of hair and eyes, but because mental,

emotional, moral, and personality traits are not always displayed, they often are not detected. In any high-school class of 25 to 30 unselected pupils, if one could observe visible evidence of mental traits, the degree and extent of the differences would be even greater than the more obvious physical ones. To detect the variations in mental traits, teachers must employ tests, rely on observations, and get pupils to express themselves verbally and in activities. Physical variations need only be observed by inspection.

The distribution of differences. Nearly all traits are distributed normally, or they approximate a normal distribution. The majority tend

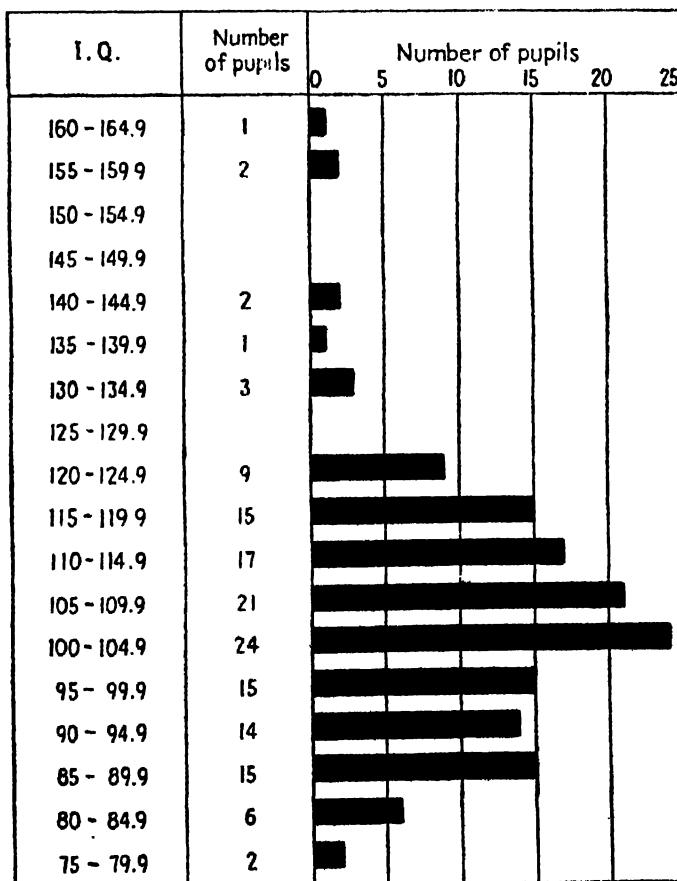


FIG. 17. Intelligence quotients of 147 high-school pupils representing a typical small high school. (Data gathered by the authors.)

to cluster around a central point, and a small group deviate very far either above or below this center. In Fig. 17, the distribution of mental-

test scores of an unselected group is shown; the same data are shown in Fig. 18 with the mid-points of each bar connected and smoothed. The resulting curve is bell-shaped and resembles a curve called a "normal curve." Strictly normal curves are seldom found in actual measurements of groups, but most measurements, if there are enough cases and no selective factor operating, will approximate a normal distribution. The normal curve is valuable in studying the variations among pupils, the spread or extent of the variations, and the number of cases deviating very far from the means.

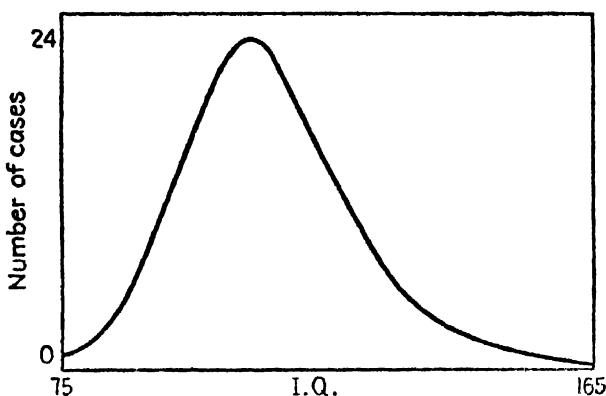


FIG. 18. Intelligence quotients of 147 high-school pupils representing a typical small high school. (Same data as in Fig. 17, plotted by connecting the mid-points of the frequencies and smoothing.)

Differences in mental ability. Figures 17 and 18 represent not only how traits are distributed in general but also how general mental ability is distributed. In this group of 147 high-school pupils, the range of I.Q.'s was from 76 to 164 or, according to the general interpretation placed on I.Q.'s, from feeble-minded to near genius. Because 164 is more than twice 76 one cannot say that the former is twice as bright as the latter. Just how much better he is must be stated in terms of a description, rather than a ratio, for until zero intelligence can be determined one cannot state differences as a ratio.

Knowing that one pupil has a high I.Q. and another a lower one is not sufficient information for instructional purposes. In addition to this, it is necessary to know just what differences there are when there is a variation of the I.Q. of persons of the same chronological age. In general the brighter pupils can learn more rapidly and understand difficult material more readily. They memorize more rapidly and re-

tain longer. They are better at problem solving, have keener imaginations, better discriminating ability, and greater ability in mental imagery. They can also exercise better judgment and can see relationships more readily than those of lower mental abilities.

Differences in achievement. Just as those with higher I.Q.'s are superior in mental traits, so have they achieved more than those of the same chronological age, but with lower mental ages. Differences will be detected in knowledge of the common, everyday things of life, in number and variety of interests and experiences, in vocabularies, use of English, reading speed and comprehension, and general achievement in school subjects. It is often thought that duller pupils do not have strong interests compared with brighter pupils. The true difference lies in the number of interests rather than their intensity, for dull pupils do have strong interests, but not in so many things. The nature of an academic and linguistic curriculum is more appealing to the bright than the dull.

Differences in specific aptitudes. Although there is a tendency for those who excel in one capacity to possess outstanding ability in others, owing to such various factors as innate ability, physical structure, environment, interest, and opportunities, there are usually a few traits possessed by each pupil which are stronger than others. Many examples can be given of outstanding men who achieved distinction in many fields, as Leonardo da Vinci, Sir Francis Galton, Benjamin Franklin, and Samuel B. Morse, but each of these men was not equally competent in each field, and there was one in which each did better than in others. There is more likelihood of observing extreme deviates in musical, artistic, motor, and mechanical ability than in such mental traits as mathematical and linguistic ability. An unselected class will show wide ranges of achievement in all these traits.

Differences in moral, emotional, and personality traits. Differences in moral traits will vary all the way from the strictly honest to the kleptomaniac; from those who never cheat to those who are always looking for an opportunity to do so; from those who are always truthful to those who prevaricate even when the truth is more to their advantage. In any large group of pupils, one will find the bragger, the bully, the egotist, the "smart aleck" types at the one extreme and the modest, bashful, timid, reticent, and backward types at the other. With respect to emotional development, the range is from the even-tem-

pered, quiet, docile, easily hurt, weeping type to the impulsive, quick-tempered, temperamental, emotional type of pupil. The great majority, however, lie between these extremes. It must not be assumed that there are distinct types, for there are not. Each individual differs from others in quantity and not quality, and there is a gradation constituting a continuous series from one extreme to the other, with the great mass of individuals grouped around the middle.

PROVIDING FOR INDIVIDUAL DIFFERENCES

Generally speaking there are two ways of providing for individual variations. These include techniques employed in the classroom by the classroom teacher, which may or may not require cooperation with other teachers, and administrative devices, or those involving a change in the entire school organization.

Classroom techniques. There are very few classroom techniques of teaching which are effective if applied to a group as a whole without consideration of the fact that *a group is a collection, not a composite, of individuals*. For example, it has been found that knowledge of results of effort or study causes learning to proceed more rapidly than when this knowledge is withheld; but the knowledge of results must be specific for each individual. Likewise, group graphs of achievement are not as efficacious as individual graphs. It has often been stated that group competition is a good motivating device, but it has little effect unless each individual is made aware of his own contributions to the group. The broad general statement that "The whole is better than the part method for memorizing" is meaningless or almost unfounded, for individual differences are such that what constitutes a whole for one person does not necessarily do so for another. Furthermore, if the teacher tries to determine what constitutes the whole, she is assuming that there are no differences among pupils or is ignoring them.

Much time has been wasted on drill or practice in fundamentals because all pupils have been drilled on the same materials. Drill should be motivated, socialized, and individualized; that is, the weak points of each pupil should be determined by means of diagnostic tests and specific, individual remedial exercises prescribed for improving these weaknesses. This requires that each pupil will drill on separate material.

Many techniques are effective for pupils of one level of intelligence

which are not equally effective for those of another level. For example, it is difficult to draw conclusions concerning the relative merits of the lecture-demonstration method and the individual-laboratory methods of science instruction, because pupils of different levels of ability react differently. The amount of home and school study varies with the ability of pupils, while transfer of training is directly related to the intelligence of pupils. The undifferentiated daily group assignment, if pitched to the average pupils, is usually above the ability of the poorer ones and so easy that the better ones will not have to exert themselves. Individual, differentiated, long-term assignments, supplemented from time to time, recognize pupil differences.

Unit-laboratory plan. Perhaps the best plan for caring for individual variations in the classroom is the unit-laboratory plan for content subjects and the self-directive plan for drill subjects.¹³ In both these plans, the daily recitation with its attendant evils is replaced by individual and subgroup work periods with the teacher serving as guide and director. Each pupil works on a different phase of a unit or topic, the selection being made by the pupil. These selections should be congruous with his interests and abilities. In this method, the superior pupils are not permitted to use their superior ability to "get by" with less work, while the duller ones are forced to work to the limits of their capacities. Each contributes to the common topic in proportion to his ability. When all have completed the various phases of the work, reports may be made to the entire group, or some form of culminating activity devised to organize, summarize, and integrate the unit around the whole general field of learning.

Self-directive plan. In the self-directive plan of instruction, employed in gaining a greater mastery of fundamental principles of such subjects as arithmetic and reading, each pupil is given diagnostic tests or is analyzed through classwork. Each pupil's strong and weak points are recorded and made known to the pupils, who proceeds to remedy the weaknesses through appropriate remedial exercises. When each pupil feels he has mastered a phase of the work, he gives himself a test, evaluates his own progress, and, according to the results of the

¹³ Robert W. Frederick, Clarence E. Ragsdale, and Rachel Salisbury, "Directing Learning," pp. 180-217, Appleton-Century-Crofts, Inc., New York, 1938; and I. N. Thut and J. Raymond Gerberich, "Foundations of Method for Secondary Schools," Chaps. 9, 10, McGraw-Hill Book Company, Inc., New York, 1949.

test, either does additional work on the same phase or proceeds to additional skills. After the pupil tests himself, the teacher gives him additional tests.

These two plans, although they may be employed by a single teacher, are more effective if teachers of the entire school employ the same techniques. Cooperation of the pupils, aid from other teachers, and administrative supervision are better secured when the entire school makes the change from the recitation method to the unit-laboratory method.

The most retarded pupils, when achievement is measured on the basis of what the pupil is capable of learning, are those with superior abilities. Few ever work to more than a major fraction of their capacities. It is estimated that the more intelligent work to about 20 to 30 per cent of their capacities and those of low abilities to about 80 per cent in order to do passing work in school.

Varying time, content, and method. The only things which can be varied in instruction are time, content, and method. The Dalton plan makes provision for varying the amount of time each pupil devotes to units by means of written assignments called "contracts" on which each one works until the material is learned to the satisfaction of the teacher. If one can complete a unit in a short time, he is permitted to proceed on others, while the slower pupil takes a longer time to get the same material. Methods varying the time have the disadvantage of having an uneven front, for after a few months, owing to differences in speed, ability, and application, only a few pupils will be working on the same units at the same time. This method advances pupils vertically, for some pupils are advanced more rapidly than others, while the content is held constant.

The varied, or differentiated, assignment holds the time constant, keeps an even front, but varies the content. All pupils work on the same fundamental principles of each unit, and those who finish quickly may do additional work while slower pupils are mastering the basic material. In this method, although all pupils advance at the same rate, superior pupils broaden their knowledge at the same level. It is often spoken of as "enriching the course" for superior groups by additional work.

Administrative plans for providing for individual differences. The project method, the group-study plan, the Dalton plan, and the social-

ized recitation were all forerunners of the unit-laboratory and self-directive plans. All these plans are still being practiced in some form in many schools, but since the unit plan is a more recent outgrowth of these, a description of them would be of historical interest only. Since these plans still require that pupils be grouped or sectioned into classes on some basis, grouping is practiced in some form or another in nearly all schools. The various bases for grouping are ability, sex, chronological age, puberty, failure prospects, physical handicaps, mental defects, and curricula.

Ability Grouping. Grouping on the basis of mental ability and achievement is commonly called "homogeneous grouping." The usual bases for sectioning pupils involve two or three criteria, as I.Q. or M.A., achievement-test scores, marks, and judgment of the teacher. Whether the M.A. or I.Q. is used depends upon the age range of the pupils. If they vary widely, then the M.A. should be used; if near together, the I.Q. is a better basis. Usually two criteria are sufficient, while more than three are unnecessary and hard to administer.

The number of sections should be three if possible: the extremes, and the central portion of the distribution. If only two sections are made, each one will contain average pupils, with poor ones in one group and superior in the other. After being sectioned, transfers should be made if one is found to be a misfit. Since abilities and achievement in different subjects are not uniform, separate groupings should be made for each subject.

Many claim that homogeneous grouping should not be practiced because the groups are not homogeneous after they are sectioned. This is quite true. To make them strictly homogeneous, there would have to be as many groups as there are pupils. There will always be overlapping of abilities regardless of the care and accuracy employed in sectioning. Other arguments against ability grouping are that those in the slow section are often marked as being slow by their classmates, while those in the upper group are likely to feel that they are superior in all ways. These faults may be partly obviated by not telling pupils that any selective techniques were employed in sectioning them.¹⁴

The arguments for grouping are that, since different techniques need to be employed for those of different levels, grouping facilitates

¹⁴ See William A. Yeager, "Administration and the Pupil," Chap. IX, Harper & Brothers, New York, 1949.

doing so. While a teacher is taking time to explain to one or two pupils who are slow to comprehend some principle or see some relationship, the brighter pupils will be bored. If teachers think that so-called homogeneous grouping will eliminate these problems, they are doomed to disappointment, for, *after grouping, differences, which were formerly submerged, will become evident; and unless an individualized method of instruction is employed in each group, the plan will be ineffective.*

Regardless of whether the content or the time is varied, the method of instruction should vary for different groups and individuals within groups. Perhaps the greatest advantage derived from grouping is that it gives the teacher an opportunity to vary the time, content, or method for the different groups. If the teacher does not vary one of these three, there is little value in grouping.

Sex Segregation. As mentioned earlier in this chapter, educationally little difference need be made between boys and girls. Perhaps the chief differences between the sexes are those in interests and in physical structure. If individualized methods of instruction are employed and the school can provide elective courses, the factor of interest will not require any sex segregation. Some advise sex segregation in biology where reproduction is taught, but when many biology teachers were asked whether they preferred mixed or segregated groups, the great majority said that separation was not necessary.¹⁵ In physical education, the sexes should be separated.

If boys and girls are to be taught to live together and to have proper attitudes toward each other, it cannot be done by separating them. Classroom activities are the most vital of school life, and, if separated there, a feeling of secrecy, taboos, and prohibition is established between the sexes. Sex segregation is an old idea, which had its origin in religious practices and training. Furthermore, economic conditions would prevent it, even if sex segregation were good.

Grouping by Chronological Age. It is doubtful that much will be gained by grouping secondary-school pupils according to chronological age. There is a wide range in ages from the seventh to the twelfth grades, but the age range in a given grade is not sufficient to require marked differences in instruction. The mere fact that each pupil has completed the same number of school grades is evidence that they are

¹⁵ Informal investigation by the authors in university classes.

about as homogeneous as they can be. Perhaps the only main difference is that of maturity or stage of development with respect to puberty, and chronological age is a poor measure of this degree of development.

Grouping by Puberty. One of the early claims made for the junior high school was that it would bring together a homogeneous group with respect to stages of physiological development, but actual measurements of adolescents reveal that there is no given chronological age in the junior high school at which pupils are homogeneous with respect to puberty. In grades 1 through 6, pupils are nearly all prepubescent. In grades 7, 8, and 9, they are at all stages of development; therefore, if there is an advantage in grouping according to puberty, it should be practiced in the junior high school.

There is a relationship between mental development and physiological development; so if grouping is based on the one, the other factor will be included. Likewise, such a basis would bring together a group more homogeneous with respect to emotional and social development, and pupils do better work when they are grouped with those who are like them in social, mental, emotional, and physical respects, regardless of chronological age. Since girls mature slightly ahead of boys, grouping by puberty would indirectly result in the same advantage claimed by the proponents of sex segregation.

There are many advantages of grouping on the basis of puberty, but the actual mechanics of sectioning pupils are difficult. Changes from one stage of development to another are gradual and not so obvious that the usual classroom teacher can detect them. Furthermore, a constant reclassifying of pupils would be necessary to keep the groups homogeneous. Since there is the relationship between stages of puberty and mental ability, grouping on the basis of the latter will serve the same purpose. As to social grouping, the natural grouping of the pupils themselves in free-elective subjects and activities is a better division than that derived from any basis employed by the faculty.

Varying Pupil Loads. One of the chief methods of varying the amount of work a pupil does is by varying the pupil loads. Pupils who are capable, as demonstrated by previous marks and activities, should be permitted to carry maximum loads in terms of courses of study and in extracurricular activities, and, conversely, those who are failure prospects or those who find it difficult to do satisfactory work should

have their schedules restricted and loads reduced to a minimum. This may result in a few pupils' requiring longer than the usual time to complete the secondary school, but, as a general rule, a minimum load should permit one to progress normally, while those who are able to do additional work should profit by an enriched curriculum rather than by finishing school in a shorter time.

Special Classes for the Physically Handicapped. It is a debatable question as to whether pupils possessing physical defects, but not of the type which inhibit doing schoolwork, should be segregated from normal pupils or placed in groups with them. It is claimed by some that the presence of defective pupils is unwholesome and may have unpleasant effects upon the others; while others insist that all should be grouped together in school for they are in life, and through school associations they will learn to have a greater understanding of and sympathetic feeling for the physically handicapped.

If the defects are of such a nature that special treatment or techniques are necessary, as defective hearing, vision, or speech, or any factor resulting in inability to profit by normal instruction, handicapped pupils should be segregated into special classes or special schools. In these special classes, teachers may employ suitable techniques to meet the needs of the group. Many states have provisions for special classes for the handicapped.

Special Classes for Mentally Deficient Pupils. Few mentally deficient pupils survive the elementary school and reach high school. Since there is a tendency to give courtesy promotions in the elementary school to those who cannot profit by the instruction, many will complete the elementary school but very few, if any, will enter high school unless they have the ability to profit by some type of secondary-school work. Those who are mentally deficient should be placed in special schools where suitable instruction may be given.

Integrated Activities. One of the main purposes of integrated activities (commonly called "extracurricular" activities) is that of providing an opportunity for pupils to pursue their major interests. The activities should be purely elective, and through them special aptitudes, interests, and capacities may be discovered, developed, and pursued.

Special-interest courses. Over and above the required courses, or common learnings, all high schools should offer electives from which pupils may have an opportunity to choose those subjects in which

they are especially interested, or which they need. Elective courses represent the beginning of specialization, which should not come until after the individual has achieved an adequate general education.

Aims and functions of electives. There are several functions of the elective courses in high schools, the main ones being:

1. To further the legitimate aims and functions of secondary education.
2. To make provision for individual differences in interests, needs, and capacities.
3. To provide prevocational education for those not intending to go to college.
4. To begin the period of specialized training.

One of the purposes of secondary education is that of exploring the various fields of learning. General education provides an opportunity of exploring various fields selected by curriculum makers, and the special interests give pupils an opportunity to use their own judgment in making selections. Permitting pupils a free choice in the selection of a limited number of subjects is a form of pupil cooperation in curriculum making. It is impossible to offer all the courses in which pupils might be interested and, perhaps, not desirable. Only those should be selected which further the legitimate aims and functions of secondary education. Those which make the greatest contribution to these aims and provide for the greatest number of pupil interests are to be preferred.

Pupils will have discovered in the general curriculum special interests which they will want to pursue further, and the opportunity should be provided. Likewise, certain subjects will be needed by various groups for college entrance or as subjects basic to further study in other institutions. Those offered for these reasons are algebra, geometry, physics, chemistry, various courses in history, and foreign languages.

For those not intending to go to college, elective subjects provide a means of prevocational training of a general nature which will aid in selecting a vocation and advancing in it. These should be selected on the basis of providing a general background to a large number of specific vocations which are widely distributed and which have social and personal as well as vocational value. The content of vocational subjects should be so selected and presented that it will contribute

to other than the vocational objective of education. Agriculture, home-arts, industrial-education, business-education, and fine-arts courses meet these requirements.

Number of electives permitted. There seems to be a growing tendency to prescribe the major part of the curriculum and to give fewer choices to pupils. Part of this is due to the expansion of the general curriculum to meet the needs of a complex society, and part to the belief that its content has universal interest and value. The common learnings are selected on the basis of universal needs. Fewer electives are offered as a means of meeting individual differences, for the unit-laboratory method of teaching ideational subjects and the self-directive method of teaching skill subjects provide for them in the general curriculum. Further provision is made through the wide variety of activities which have been included in the curriculum.

The proposed curriculum prescribes about three-fourths of the content. This leaves at least four free electives. If schools are large enough to offer a wide variety of subjects, the number prescribed may be reduced by certain substitute courses. For example, special courses in business English, journalism, and dramatics may be substituted for the fourth year of English, or agriculture and home economics may be substituted for one of the required units in science. There is no good reason why many pupils cannot pursue more than four "solids" a year and earn more than 16 units in four years. All units carried above a normal load may be elected.

Grade placement of electives. Electives should not be permitted before the ninth or tenth grades, and the number should increase to the twelfth grade. Elective courses such as typewriting, which have social and personal value, should be offered early so the skills acquired may be used during school. Subjects which have value mostly for college entrance should be offered in the eleventh and twelfth grades to leave room for other subjects placed early in the curriculum for those who will perhaps not finish high school and certainly not attend college.

Organization of electives. The usual plan recommended and practiced for organizing the electives is on the logical or subject-matter basis. There are several reasons for this. If a pupil elects a course because he is interested in it or needs it, and it is combined with another, it may introduce topics not in his inventory of interests. This does not mean that we cannot make correlations between parts of

somewhat unrelated subjects or that subjects which have much in common cannot be combined. Interests are more likely to be broad than specific. Likewise, if electives cover a wide range of subject matter, there is a greater probability of providing for all the individual interests than if they are made more specific.

SCIENCE

The two most popular elective courses in science are chemistry and physics offered as logically organized subjects in the eleventh and twelfth grades. Other science subjects such as separately organized courses in botany, zoology, electricity, geology, photography, astronomy, aeronautics, and radio are offered in larger high schools. None of these are offered in a large number of schools, and the registrations in each are not great.

Normally, physics is offered in the twelfth grade and chemistry in the eleventh. In smaller high schools, the practice is to offer one or the other of these or to alternate them. The latter is a desirable practice, for it makes possible enrichment of the curriculum by providing more electives.

Some of the trends in the teaching of high-school science are the organization of the contents into units, the use of visual materials, the use of homemade apparatus, the continued interest in organizing science clubs as a means of enriching regular courses, the better use of equipment, and a study of the most efficient techniques of demonstrating scientific laws and principles. The trends are also toward a greater utilization of community resources in science courses and in relating instruction to the community. In many schools, curricular content is being determined after a community survey and an inventory of those phases of community life pertaining to science has been made. For example, information is secured pertaining to the application of scientific principles in the home, on the farm, in those industries located in the community, and in those related to health, sanitation, safety, transportation, and communication.

The community not only furnishes a laboratory for observing in action scientific principles which are studied in school but also suggests many which should be studied and which might otherwise be overlooked. Pupils have an opportunity to apply these principles in

actual situations and, by so doing, render direct service to the community.

Physics. Physics has as great a variety of applications in everyday life as any course in science. It covers the general divisions of mechanics, heat, electricity, sound, and light. General principles of these divisions are employed in heating, lighting, and ventilating homes and buildings; in the economic consumption of utilities; in the proper use of electrical appliances; in musical instruments; and in photography. Through a study of physics, an understanding is gained of such mechanical devices and machines as the telephone, telegraph, radio, phonograph, sound picture, gasoline and steam engines, X rays, automobile, and airplane. These machines are found in all parts of the country, and it is doubtful that there are many pupils who will not come in contact with many or all of them. An understanding of machines is not essential for some consumption purposes, as in the case of the cinema or telephone, but it is essential for the operation of machines like the automobile. In those cases in which pupils will not need an understanding for utilitarian purposes, knowledge will give a greater appreciation of the services rendered and will satisfy a curiosity as to how the machine operates and dispel ideas of "magic."

From an analysis of 162 statements of 68 authorities in physics, Hurd formulated the following aims and values of physics in secondary schools: ¹⁶ It

1. Reveals and interprets physical life, giving breadth, perspective, and balanced appreciations.
2. Develops a rational individual, able to use certain specific knowledge, skills, interests, abilities, or habits in better solving the everyday problems of life.
3. Develops social and vocational efficiency.
4. Prepares students for college entrance.
5. Teaches the laws and principles of physics.

Chemistry. Although chemistry has fewer applications to everyday life than physics, there are a sufficient number to warrant its inclusion in the curriculum on practical aims even if there were no others.

¹⁶ In the Thirty-first Yearbook of the National Society for the Study of Education, pp. 246-247, Public School Publishing Company, Bloomington, Ill., 1932.

Chemistry has a wide variety of applications in the home, as in cooking, cleaning clothing, dyeing, bleaching, disinfecting, and exterminating insects, and plays an essential part in the production of medicines, soaps, perfumes, and plastics. A knowledge of the chemistry involved in these processes is not indispensable, but a better understanding will lead to more efficient use of materials and give a better appreciation of the services rendered through chemistry.

A knowledge of household chemistry may contribute to safety in the home. A knowledge of such poisonous gases as carbon monoxide and natural gas, of explosive gases and cleaning solutions, and of antidotes for various medicines which are poisonous if taken in excess will reduce the number of accidents caused through these sources.

Through chemistry, many have found outlets for leisure-time activities, and chemistry is needed in hobbies which also involve other subjects, such as photography. In some leisure-time activities, a direct knowledge of chemistry is essential, as in electroplating copper or nickel, while in others some laboratory techniques are essential, as in those involving measurements of volumes, the use of chemical balances, or the construction of furnaces for melting metals. If one is to derive the greatest amount of enjoyment from photography and reduce the cost of the hobby, one must mix his own solutions and develop his own negatives and prints. The scientific knowledge and skills involved in electroplating copper, nickel, silver, and chromium are not great and can be acquired by any high-school pupil. Etching, the opposite of plating, is an easily acquired hobby. Many crafts involve the casting, welding, soldering, etching, and plating of metals and various plastics. Over and above hobbies of a utilitarian value involving chemistry, many young people have amateur chemistry outfits with which they may produce chemical reactions causing color changes, effervescence, crystallization, spontaneous combustions, and mild explosions which are enjoyed because of their spectacular nature.

A knowledge of chemistry will give pupils a better understanding and appreciation of the legions of applications of chemistry outside the home, especially in the fields of agriculture and industry. Such a knowledge may also lead to an interest in any number of vocational pursuits. The general fields including chemistry are soil fertility, plant foods, insecticides, control of bacteria, explosives, fuels, soaps, dyes,

perfumes, medicines, mining, smelting, refrigeration, printing inks, paints, and the synthesis of many products formerly secured only in nature.

The aims of chemistry presented so far are of a practical nature. Chemistry may be studied also for the pleasure derived in the subject itself without reference to the exigencies of life. The beauty of chemistry is found in its exactness, the orderliness of the periodic table, the success of synthetic methods, the extent to which the reactions of elements may be predicted and pictured by means of symbols, formulas, and equations, and the wide distribution and uses of the elements and their effect on mankind.

Methods of teaching elective courses in science. It may be assumed that those who elect courses in science do so because of an interest and aptitude in the subject. Regardless of this, the subject must be presented in a manner to show its applications to life and how it may function in everyday life rather than as compilations of laws, rules, principles, facts, formulas, and equations. Emphasis should be placed upon the development of an ability to generalize and solve problems and acquire concepts, rather than on the accumulation of knowledge.

As much use as possible should be made of laboratory apparatus and equipment. So far as it has been demonstrated, scientific experiments may be either performed by the pupils or demonstrated by the teacher, if results obtained are measured only in terms of the acquisition of knowledge. In many experiments, it is better for a pupil to experience a demonstration effectively by observation than ineffectively through his own performance. In others, pupils may gain a better understanding of a scientific principle through individual activity than through lecture demonstrations. Facts may be acquired through either method; but actual experience is needed before one has knowledge. If pupils have learned to generalize from their knowledge, they have acquired a concept. Thus facts are only the first step in the process leading to concepts, and the most important intermediate step is experience. Vicarious experience is seldom as valuable as actual experience, but sometimes we must resort to the vicarious because it is impossible or impracticable to teach things directly.

In the acquisition of skills and habits, actual performance is essential. Granting that the high school is not the place to train scientists, if certain phases of science are to function in the lives of pupils, cer-

tain habits and skills must be acquired. A few of these are skill in the use of a chemical balance, a bunsen burner, a microscope, and a thermometer and in pouring solutions from one container to another. Habits of cleanliness, accuracy, exactness, safety, and economy are also necessary.

Actual necessary experience may be acquired and the necessary habits and skills gained through a number of individual exercises, while the majority may be demonstrated. Demonstrated experiments require less time and equipment than individual laboratory work, which favors the smaller high schools especially.

Integrating elective science courses. Although physics and chemistry maintain their logical organization as electives, they may be integrated through cooperation or fusion. If physics and chemistry are to be made practical and are to function in pupils' lives, the materials must be applied to life situations. Making physical and chemical laws and principles ends in themselves will not result in much transfer of training. Transfer must be taught by generalizing and applying. There is little place in a modern high school for pure science. If correlation of subjects in general education is justified on the basis that it facilitates transfer, and does so because there are no life-adjustment problems involving one subject only, then it is just as sound for the elective subjects. On the other hand, the elective subjects should grow out of the general curriculum and be designed to permit pupils to pursue further certain subjects of their own interest. This precludes any argument for unifying the entire content of the electives but does not preclude fusing such closely related subjects as physics and chemistry, botany and zoology, plane and solid geometry, or the separate histories forming the fused course in world history.

A senior science, involving mainly physics and chemistry but drawing on other sciences if needed and organized about units, should meet the needs of senior-high-school pupils more than separate courses. At present, physics and chemistry are too technical and impractical for the average high-school pupil. A suggested group of units for such a course would be:

How man has learned to keep time.

Conservation of natural resources.

Getting a pure water supply.

Getting a pure food supply.

Photography.
Transportation.
Communication.
Purchasing commodities.
Consuming utilities.
The composition of the earth.
Getting raw materials.
Man's place in the universe.
Heating, lighting, and ventilating homes.
Patent medicines
Preserving foods.

An example of the close relationship between certain phases of physics and chemistry is found in the storage battery. Both subjects are essential to complete understanding of this relationship. If the subjects are organized logically, half the story is told in each course. If a pupil pursues only one of the courses, he never gets the entire picture; if he pursues both, but each in a different year, he may never associate the chemistry of the battery with its physical properties. The same is true in photography, refrigeration, conservation of minerals, safety, consumer education, and the consumption of utilities. The argument that physics will be poorly taught through the medium of chemistry, and vice versa, is not necessarily valid: both might be better taught. Few teachers prepare for one only of these sciences, for, in training for one, teachers are usually required to take courses in the other.

MATHEMATICS

The mathematics which should be common for all is general. The majority of it should be arithmetic, with a number of fundamental principles of algebra and geometry. The usual special-interest courses in mathematics are separate, logically organized courses in algebra, geometry, and trigonometry. The usual sequence of courses is elementary algebra, plane geometry, advanced algebra, solid geometry, and trigonometry. There is no pedagogical basis for this order, for geometry does not depend upon a knowledge of algebra. If geometry is interspersed between beginning and advanced algebra, much time must be spent in the latter course reviewing fundamental principles

before more advanced concepts may be presented. If both algebra and geometry are needed for college entrance, the order is not important, for no pupil who will attend college will drop out of school before graduation. One has no greater social utility than the other, which precludes a preference on that ground. There seems to be no basis other than tradition.

Aims and functions of elective courses in mathematics. Elective courses in mathematics serve several purposes:

1. They provide an opportunity for those who wish to pursue further the study of quantitative relationships in a formal manner.
2. They are needed by many pupils to meet college-entrance requirements. The usual requirements are one unit in each of algebra and plane geometry.
3. They are needed by many pupils for a basis for various vocations.

A few of the more immediate aims of elective courses in mathematics are:

1. To further the development of the concept of number and of quantitative relationships.
2. To increase facility in fundamental skills and develop new ones requisite for further study in science, engineering, and advanced courses in mathematics.
3. To develop an understanding and appreciation of the part mathematics has played in various fields of human activity.
4. To further the legitimate aims of secondary education.

Practical and social values of mathematics. There are few practical values of algebra, geometry, and trigonometry found in everyday life. Arithmetic has great social and practical value in many activities of life. Many false values have been advanced for these subjects, such as the use of progressions in computing compound interest, or measuring the distance across a river or the height of a tree by trigonometry. The former can be computed directly by arithmetic or from interest tables. The latter, if there is an occasion requiring great accuracy, should be done by a surveyor; otherwise, it may be estimated or measured by similar triangles. One great need for measuring distances is in taking pictures. The methods usually employed are estimates, stepping off the distance, or using a tapeline or range finder. One of the authors has had years of experience with amateur photographers but has never

seen one use trigonometry to measure his distance for a picture. There are plenty of worthy aims of mathematics without introducing remote possibilities in the lives of pupils.

A knowledge of mathematics has a great value in developing an appreciation of the place and importance of mathematics in modern society. Its application to the fields of science, industry, commerce, and statistics and to the universe has changed man from a qualitative to a quantitative thinker and has been the basis for all science.

Vocational values of mathematics. The great majority of vocations of the skilled-trade type require a knowledge of arithmetic, and many require some knowledge of algebra and geometry. Those above the skilled trades in the fields of engineering, architecture, surveying, mapping, geology, astronomy, physical sciences, statistics, economics, and banking require a knowledge of advanced mathematics.

The propaedeutic value of mathematics. One of the arguments advanced to justify the inclusion of formal courses in algebra and geometry in the secondary-school curriculum is that they are necessary to success in subsequent courses in other fields, especially science. These claims have been investigated by many and summarized by Benz in the Eighth Yearbook of the National Council of Teachers of Mathematics.¹⁷

Rugg and Clark investigated the amount of algebra needed in subsequent courses in mathematics and science. They concluded that "half the material in first-year algebra cannot be defended in terms of academic use."¹⁸ When college courses in physics and chemistry were studied as to the mathematics required, it was found that the geometry needed in college physics was very elementary, not difficult, but often used. Williams concluded, with reference to college chemistry, that "a knowledge of fundamental processes in algebra is desirable, but by no means as essential as might be inferred."¹⁹ Congdon concluded that very few geometric facts are needed in physics and these are the more simple and fundamental ones; and that the meaning of the sine,

¹⁷ H. E. Benz, "A Summary of Some Investigations of the Teaching of High School Mathematics," pp. 14-54, Eighth Yearbook of the National Council of Teachers of Mathematics, Teachers College, Columbia University, New York, 1933.

¹⁸ *Ibid.*, p. 17.

¹⁹ *Ibid.*, p. 19.

cosine, and tangent and the use of tables of these functions constitute the amount of trigonometry absolutely necessary. He further concluded that the numerical trigonometry now taught in many junior high schools is quite adequate for college freshman physics.²⁰

From these investigations, it seems that college-entrance requirements for mathematics are based on tradition rather than actual needs. "It seems likely that what college instructors want is the degree of intelligence represented by the ability to do the (mathematical) tasks when they insist that students be able to perform algebraic problems of a difficult level."²¹

Since the requirement of two units of mathematics is still retained by many colleges as an entrance requirement, mainly because of its selective technique, rather than as an actual need, they can well abolish it and use other admission techniques. The requirement is unjust to the smaller high schools and to those pupils who do not prefer mathematics but who do have the ability to pursue a college course not including technical science and formal mathematics. Much evidence is accumulating concerning those who are admitted to college without the usual requirement in mathematics and who finish without the courses or who take them during the junior or senior year. One of the authors investigated many of these students, all of whom claim that they were never handicapped because they had not had a course in algebra or geometry.²²

Mathematics in smaller schools. The small high school, of necessity, can offer only a single curriculum. The offerings are usually so few that practically every subject taught is required for graduation. This is especially true in schools enrolling fewer than 50 pupils.

If only one curriculum is offered, a question immediately arises as to what courses should be included. In making a selection, teachers are handicapped by college-entrance requirements, tradition, the heterogeneous character of the pupils, and the external influence of parents and organized groups. Many will not go to college, and for those who do studies have shown that college success does not depend upon

²⁰ A. R. Congdon, Training in High School Mathematics Essential for Success in Certain College Subjects, *Teachers College Contributions to Education* 403, Teachers College, Columbia University, New York, 1930, p. 91.

²¹ Benz, *op. cit.*, p. 18.

²² Unpublished paper.

the pattern of high-school courses a student has pursued or on any single course in the curriculum.

It is therefore unsound to offer strictly college-preparatory mathematics in small schools for the benefit of a few, if this practice neglects the needs of the many who will not go to college. The high school has a responsibility for those preparing for college, but it also has one for those who are not.

The following principles will be applicable in smaller high schools in order to meet the problems concerning offerings: They should

1. Offer general or composite mathematics in grades 7, 8, and 9.
2. Offer college-preparatory mathematics in the senior high school. Those who leave at the end of the ninth grade will have had practical rather than formal mathematics. Those intending to attend college will continue through grade 12.
3. Make college-preparatory mathematics as practical as possible. No harm will befall pupils in college if the courses are not formal.

FOREIGN LANGUAGES

Foreign languages, until recently, have occupied an important place in the secondary-school curriculum. One of the greatest influences of the Latin grammar school was the position it gave Latin in the academy and in the high school. In the early period of the academy, there was a struggle to give English a place, so firmly rooted were educators in the Latin tradition. College-entrance requirements further accentuated and prolonged the influence of Latin in the curriculum, and it has been only in the last three decades that colleges have modified their specific prescriptions of Latin for entrance.

The introduction of modern foreign languages began in the academy and continued into the high school. Although many languages were taught, and many are taught at the present time, only three modern foreign languages have been very popular: French, Spanish, and German.

Trends in registrations in foreign languages. The popularity of foreign languages is waning, because of three chief factors: (1) the increased enrollment has brought into the high schools a larger group who are neither linguistically minded nor interested in languages, (2)

colleges have reduced, and in many cases removed, language requirements for entrance, and (3) as additional courses are added to the curriculum and pupils are given a greater variety of subjects from which to select courses, a reduction of pupils enrolling in any given subject is a natural result.

In 1948-49, about 17 per cent of all pupils were studying foreign languages. Greek was still reported as being taught in five states, showing a decline since 1934. Languages appearing for the first time in 1949 were Russian, taught in one state, and Portuguese in three states. The order of frequency of enrollments in foreign languages is Spanish, Latin, French, and German.²³

The mortality in languages is great. Only 70 per cent of those who enroll for a first course continue to a second.

General aims of foreign-language instruction in secondary schools.

There are three classes into which aims of foreign-language instruction may be divided: (1) the general aims, (2) the specific aims, and (3) the incidental aims. This division may be made of any subject, but emphasis is given here to the distinctions because the incidental aims of language instruction have been, by many, stated as the primary ones.

There are three general aims of foreign languages which justify giving them a place as electives in the high-school curriculum:

1. To develop tolerance for, an appreciation of, and a better understanding of other people.
2. To study the literature, philosophy, history, culture, and mores of people of other countries through the medium of their own language.
3. To give those who are interested in languages and enjoy translating and speaking a foreign language an opportunity to pursue this interest.

These aims postulate two types of interest in foreign languages: interest in the people and their literature, and interest in the language itself. Relatively few persons of the total secondary-school population are interested in the abstract study of languages. A greater number are interested in the people and their literature and, in order to pursue this interest, may develop a secondary interest in the language as a means to an end. The great majority have no interest or merely a pass-

²³ Biennial Survey of Education, 1948-50, U.S. Office of Education, 1951, Chap. V, pp. 17-18.

ing interest in any of these phases, partly because they do not come in contact with many people who speak foreign languages. If toleration of other people and a better understanding of international relationships are desired, they can be developed through the medium of world history taught in English. If there are certain literary selections written in other languages which teachers believe should be read, they can be pursued through the medium of their English translations. It is quite true that literature loses much when translated, but it is better to read a novel or poem effectively in English than to stumble through it in another language.

The average high-school pupil, after pursuing two years or more of a foreign language, is still handicapped in getting meanings from foreign words. The content is usually secondary to the translation. A language must be pursued for many years before one has reached the point known as *transformation*, that is, a facility in reading a foreign language so great that it is no longer necessary to go through the medium of English to get a meaning from foreign words.

Foreign languages do make a contribution to the worthy use of leisure, but few pupils ever engage in much reading in foreign languages purely for their own pleasure and benefit. Part of this is due to the type of material selected by teachers. Much of the material chosen would not have been read for pleasure even if written in English. The exploratory value should not be overlooked, for a study of a foreign language is the best basis for determining aptitude and discovering interests in that field.

Incidental aims of foreign languages. The incidental aims claimed for foreign languages are legion. Many teachers stress them as though they were primary, being prompted no doubt by an overzealousness in defending their subject.

Foremost of these is the transfer of training value, which was explained by the two now discredited doctrines of formal discipline and the faculty theory. There is transfer of training, both negative and positive, derived from a study of foreign languages, but this is best explained on the basis of identical elements and not that languages have any peculiar potent powers of developing the intellect so it will function in any capacity. The only recognized transfer is to other languages, and the values usually claimed are for English. Studies reveal that, for those of high intelligence (I.Q.), the study of

foreign languages does bring improvement in English; for those of average I.Q., there are no measurable changes; and for those of low intelligence, the study of foreign languages even inhibits processes in English.²⁴

Another reason advanced for teaching modern foreign languages is that the pupils may at some time or another visit a foreign country and would find their knowledge of the language helpful. The weaknesses of this argument are or should be obvious. Few of the youths in American high schools ever travel abroad, and for those who do the knowledge of the language gained years before is either inadequate or forgotten, and the chances are they will travel in more than one country, so a knowledge of one language only would be of little benefit.

The college-entrance requirement of two years of Latin has been defended on the ground that it is an indirect means of selecting capable students. Studies of the predictive value of various subjects for college success show that foreign languages do not determine success any better than English, mathematics, or science and little better than the social studies.²⁵ Latin required for medicine and law is of an entirely different vocabulary from that found in Caesar, Cicero, or Virgil, and lawyers claim that the legal terms derived from Latin may be learned in a few hours of concentrated study.

Spanish has been introduced in the curriculum in many places on the grounds that pupils might want to go to Mexico or South America for commercial purposes. Few pupils will ever do this, and if they do the Spanish learned in high school would probably not be understood by the people visited.

Vocationally, languages are necessary for interpreters and foreign diplomats, but the knowledge of high-school languages would never suffice for either, and these are occupations few will elect as a life career.

These incidental reasons are not sufficient grounds for including foreign languages in the curriculum, and if they had no other values, they should not be included.

²⁴ O. H. Werner, "The Influence of the Study of Modern Foreign Languages on the Development of Desirable Abilities in English," *Studies in Modern Language Teaching*, Vol. 17, pp. 97-145, The Macmillan Company, New York, 1930.

²⁵ See Chap. 6.

Principles of foreign-language instruction in secondary schools. From the foregoing discussion of the aims of foreign languages in the high school, the following principles may be derived:

1. Foreign languages should be elective subjects.
2. Each course should be so organized that credit and value can be given for one year of work in order that those who do not reveal aptitude and interest may pursue other subjects without loss.
3. If a pupil reveals a lack of interest and aptitude in his first year of a foreign language, he should not be permitted to pursue it a second year.
4. Foreign-language study should be coordinated as much as possible with other subjects of the curriculum, such as history, English, art, and music.
5. The American plan of teaching foreign languages is based on that of European schools, in which a select few pursue languages for four to nine years, usually six days a week, and often two hours a day, while the average American pupil spends about two years, five days a week for about 34 to 35 weeks. Therefore, the emphasis should be placed on the reading of interesting stories and poems, with the primary aim on enjoyment, pleasure, and understanding. Reading for thought and meaning should be primary, rather than memorizing vocabularies and drilling on conjugations. The translation of sentences, paragraphs, and entire stories should replace the translation of words.²⁶
6. Pupils should be encouraged to read in the fields of their own major interests rather than pursuing the classics. To do this, the high-school library should contain a wide variety of foreign-language books on the level of the pupils' abilities.
7. Quoting from Arndt, "When the efforts of teachers of foreign languages are bent to inculcating in students a comprehension of foreign cultures rather than a mastery of grammar, their contribution to American education will no longer be questioned, and America will derive richer benefits from foreign cultures for the teaching of them will make these materials more accessible to our future culture builders."²⁷
8. It is doubtful that pupils who are weak in English should be permitted to enroll in a foreign language. Granted that, if properly taught, some improvement in English might be gained from the study of a foreign language, far more will be gained if the emphasis is placed directly on English. As a general rule, rather than foreign languages' helping much in Eng-

²⁶ C. O. Arndt, Grammar or Culture? *School and Society*, 47 (June, 1938), pp. 794-796.

²⁷ *Ibid.*

lish, save for a few word derivations, a knowledge of English grammar is usually deemed necessary for one to learn a foreign language. This is especially true of languages whose word order is different from English.

ENGLISH

The majority of all high schools offer four years of general or composite English. Three or four of these units are usually required either for graduation or for college entrance. In the twelfth grade, several separate courses in English are offered which may be elected or substituted for one of the regular English courses. These are journalism, dramatics, public speaking, and business English. Subjects offered for the first time in 1949 were radio, speaking and broadcasting, debate, remedial English, and creative writing; enrollments in these are small.²⁸ These courses have social and personal as well as vocational value.

Journalism. The schools which offer instruction in journalism give it in one of three places: as a part of the regular English courses, as an extracurricular activity, or as a special course. All or two of these methods may be employed in the same school.

Journalism is a special form or type of writing or composition. It is centered about the collecting, organizing, and reporting of current happenings, the description of an event, and the interpretation of activities. If there is no incentive for pupils to engage in journalistic writing, other than an assignment in an English class, they will not be challenged to do their best work. If there are school publications, they offer a practical purpose for writing.

The usual publication is the school paper. In smaller schools, it is mimeographed or printed in the local newspaper. The pupils who take an active part in the work are usually members of the journalism club, which is sponsored by the English teacher. In larger schools, the paper is printed and is often published by a separately organized class with a journalism teacher.

The school paper should never be considered as an extracurricular activity. It should be a vital part of the English courses or a part of a separately organized course. The experience the entire staff gets from meeting people through interviews, getting better acquainted with members of the faculty, studying newspapers, editing, following news

²⁸ Biennial Survey of Education, *op. cit.*, p. 7.

leads, and the actual writing done for the paper has a permanent value to the pupils, not only in their schoolwork, but throughout life. The school paper also offers an outlet for creative writing, for expressing student opinions, for interpreting the school to the public, and in creating a school spirit.

Other publications of the school in which pupils may take an active part are the school magazine, the annual, and the handbook. If only one of these can be afforded, the school paper is to be preferred; the least valuable is the handbook.²⁹

If there is a separate class in journalism, it should be open to any pupil who has completed the required number of units in regular English courses. If a staff is appointed to the school paper, only those who have ability in writing should be members. A poor writer will be a liability, and if he has literary ambitions, he can submit manuscripts without being a member of the paper staff.

Dramatics. Many excellent works of literature were written in the form of drama, which was not written to be read either silently or orally, but to be enacted. The full benefit and pleasure from drama cannot be obtained unless it is enacted.

Youth enjoys acting. Pretending, acting, and living in a make-believe world are activities of childhood, and the tendency, although in a more mature form, continues through adolescence. Drama is a form of interpretative reading enjoyed by people throughout life and is a phase of public speaking which makes effective use of the entire body, the voice, and one's language. The concomitant development of these is a factor in developing personality.

Dramatics in the high school does not consist merely in selecting one play and giving it as a public performance each year by a class or entire student body but is a regular part of courses in English. Each drama that is studied in class should be read aloud by various members taking the parts of characters. After the play has been read and understood, parts or scenes of it should be enacted. The exact lines are not necessary so long as the characters feel their parts and portray the meaning. Selections of other forms of literature may be dramatized also.

²⁹ A. E. Cross and Elizabeth Carney, rev. ed., "Teaching English in High Schools," Chap. 14, The Macmillan Company, New York, 1950.

Public speaking. Whether pupils will ever have occasion to engage in any form of public speaking or not, instruction in speech will be valuable in any form of oral expression. A great number of pupils will have occasion to speak publicly, either formally or informally. The occasion may be a speech of thanks, an address of welcome, the presentation of an award, medal, scholarship, or diploma, the making of a motion, the nomination of a candidate, or the expression of an opinion on some subject. Occasions of a formal nature requiring preparation will not be encountered by so many pupils.

The old form of school public speaking was in the form of declamations, orations, and recitations given at literary societies or on Friday afternoons. Along with the passing of these forms of speaking went the older forms of dramatic gestures and bombastic words, and in their place came the debate and extemporaneous speech. In many states, state or regional contests are sponsored in public speaking.

Whether public-speaking instruction is organized separately or is made a part of English courses, and incidentally a part of other courses, all pupils should have frequent opportunities to engage in the following types of activities:

1. To read prose, poetry, and drama to an audience of fellow pupils and visitors.
2. To recite memorized selections.
3. To make brief, informal talks, including the telling of stories, explaining something, and arguing for or against a proposition or persuading an audience to accept or reject some line of thought or some proposition.

Frequent opportunities should be given in these activities in all classes and related activities. In clubs, open forums, general assemblies, dramatics, and on special programs for patrons or in the observance of some event such as Armistice Day, pupils should be encouraged to think on their feet in front of an audience. Public speaking also includes taking part, either as chairman or member, in a business meeting in which parliamentary procedures are followed.

FINE ARTS AND MUSIC

Art in the general curriculum should be of a type that will be of value to all pupils regardless of their vocation. Elective courses in art

should be of a specialized nature designed for those with special talents, interests, and aptitudes. The chief difference between the general and specialized courses in art and music is in the shift in emphasis from the appreciation and consumer objectives to the development of skills necessary for production. This does not mean that the development of aesthetic appreciation should be neglected, but that the two phases, performance and appreciation, should be developed concomitantly.

The general objectives of special courses in art and music. There are three general objectives of all art courses which represent three divisions of more specific aims. They are (1) the social objectives, (2) the vocational objectives, and (3) the leisure-time objectives.³⁰

The general courses for all pupils stress the social objectives; the special courses, the vocational and leisure-time objectives. All pupils who have special talents in artistic fields should develop them for leisure-time activities. Those who display a high degree of aptitude should consider them as vocational possibilities. It is much easier to be successful in the nonart types of vocations with an average amount of aptitude than it is in the arts. It requires a high degree of artistic ability to be more than a mediocre success vocationally; but as a leisure-time activity one can find a high degree of satisfaction with less ability.

Activities in the fine arts. No definite prescription can be made in advance for elective courses in the fine arts. The types of activities will vary, not only in different localities, but also from year to year in the same school. Although class instruction is practiced, the majority of the work will be of an individual nature. Each individual should be permitted to pursue activities along the line of his major interests and abilities.

Group instruction, or a consideration of those elements which furnish a common background of all art, is concerned with art appreciation and the basic elements of all art. Art appreciation as a group activity involves the viewing, study, and criticism of art productions such as paintings, photographic prints, etchings, sketches, vases, statues, and productions in wood, metal, leather, cloth, and plastics. Often the work viewed will be productions of the class or traveling exhibits or materials in art galleries and museums. History of art and comparative art may be studied as a group.

³⁰ William G. Whitford, "An Introduction to Art Education," p. 19, Appleton-Century-Crofts, Inc., New York, 1937.

Basic elements of all art, or the elements of which all art is composed, are line, form, tone, color, texture, and their composition according to various principles of arrangement and color harmony. This is true of the fine arts, industrial arts, or ordinary art in the home.

For individual activities a wide variety of activities should be provided. The most common types of activities are:

1. Drawing:
 - a. Artistic.
 - b. Descriptive or informational.
 - c. Instrumental.
2. Painting.
3. Design.
4. Modeling.

These activities were judged by art teachers to have considerable value in meeting the demands of pupils in the following subject fields: the home, clothing design, city or town beautification, self-expression, industrial art, commercial art, publishing, fine arts, and cultural pursuits.

Principles of music education. A summary of the principles of music education has been given by Mursell in the Thirty-fifth Yearbook of the National Society for the Study of Education.⁸¹ The principles, in outline, are:

1. The music program is an organized opportunity for esthetic experience.
 - a. Music education should provide for increasing awareness, interest, and insight regarding music.
 - b. Music education should give the pupil a vehicle of universal emotional expression.
2. The music program is an organized opportunity for social experience.
 - a. School music experiences have great value for the general social development and adjustment of the child.
 - b. Many musical mental skills are notably subject to social facilitation.

⁸¹ James L. Mursell, "Principles of Music Education," Part II, Chap. I, pp. 3-16, Thirty-fifth Yearbook of the National Society for the Study of Education, Public School Publishing Company, Bloomington, Ill., 1936. Quoted by permission of the Society.

3. The development of technical mastery has a necessary place in music education.
 - a. Every skill, mental and motor, should be learned for the sake of its expressive use.
 - b. All technical skills are acquired best and most rapidly in connection with musical problems and not through schemes of formal drills.
 - c. The teaching of the various techniques should be associated closely with growth in musical insight.
4. The acquisition of knowledge about music has a proper and necessary place in music education. In terms of activities music should promote, the principles are:
 - a. Music is a pursuit available in a variety of significant social situations.
 - (1) Music is an important agency for the enrichment of home life.
 - (2) The music program should have definite outcomes in the Church and the Sunday school.
 - (3) The music program should be planned for definite outcomes in secular community music.
 - b. Music is a pursuit open to most persons.
 - c. Music activities that will transfer to social use should be fostered.

The most characteristic and basic aim of music, as stated by Mursell, is as follows: "The music program should aim at the promoting of active and intelligent musical amateurism."³² Music taught from this point of view places emphasis upon consumption and production for avocational rather than vocational pursuits. It should also be taught so there will be carry-over value to out-of-school activities either in individual or in group performances.

Elective music courses. The activities which are typical of general music courses or those which meet the needs of the majority of the student body are singing, music reading, and listening. For those who reveal a special talent for and interest in more specialized and intensive consideration of certain aspects of music, the types of activities which are typical are:

1. ***Instrumental Groups.*** Instrumental groups include orchestras, bands, fife and drum corps, ensemble groups (string, wood-wind, brass, and mixed), smaller groups, and piano duos and ensembles.

³² *Ibid.*, p. 10.

These group activities are often offered as extra activities which meet during the activity periods or after school.

2. *Vocal Organizations.* Vocal organizations include glee clubs, choirs, madrigal singers, and vocal ensembles, such as trios, quartets, sextets, and octets.

3. *Clubs.* Many types of clubs are organized by those drawn together by a common interest in music. These clubs further the study of music in the acquisition of musical knowledge, in the development of skills, or by furthering musical appreciation. Such clubs go under various names, as the music-study club, the opera club, the symphony club, the folk-music club, the folk-dance club, and the Mozart club.

4. *Operettas.* Operettas should be selected of such a type that the selections will be valuable for the entire school to learn. The operetta is an excellent method of combining music with drama, of advertising the school, and of integrating the activities of various clubs in the high school. Glee, choral, orchestra, dramatic, dance, costume, science, art, shop, print, and press clubs may all cooperate.

The school assembly affords an opportunity for musical organizations and clubs to perform; it also provides a place for the entire student body to engage in group singing.

Summary of principles for providing for individual differences. The following general principles for providing for individual differences may be derived from the materials presented in this chapter:

1. Pupils differ in abilities, needs, and interests; therefore, the high school should provide opportunities for them to pursue these interests further and provide for their special needs.
2. All special-interest courses should contribute to the objectives of secondary education and should be outgrowths and continuations of the general-education courses.
3. All special-interest courses should be electives. Schools should be large enough to offer a number of these courses and not have to require all pupils to pursue courses they are not interested in so as to acquire enough units to graduate.
4. Most of the elective courses should be placed in the senior division of the high school.
5. Each elective course should be complete within itself, and two years of any course should not be required in order to receive credit.
6. Within each course, students should be treated as individuals.
7. Administrative plans should be employed to help provide for indi-

vidual differences, as by grouping, permitting extra loads, and provision for participating in extracurricular activities.

8. Since time in high school is usually held constant, provision should be made to vary the content and method of courses.

9. Good instruction should increase rather than decrease the differences between pupils.

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THE CURRICULUM—SPECIAL INTERESTS: VOCATIONAL

All subjects in the curricula of secondary schools may be studied from three points of view or for three purposes: for utility in everyday life, for culture, and for vocational efficiency. These are not mutually exclusive, for one may study a subject for all three purposes. The core curriculum is based largely on utilitarian and social values. It has cultural value, and it may lead to or furnish a background for a vocation. All courses may be vocational if they aid one in discovering his own interests and abilities or give factual information, knowledge, skills, habits, and attitudes needed or useful in a vocation which is later pursued.

Definition of vocational education. Vocational education may be broadly or narrowly defined. In its broadest sense, it includes any experiences or activities in which pupils might engage which will aid them in becoming more efficient in any type of vocational work. In this sense, practically every subject in the curriculum makes a contribution, for in them are learned many facts, skills, and attitudes fundamental to broad fields of work. This definition recognizes that there is transfer of training from one situation to another, which proceeds more rapidly if it is taught and in proportion to the number of similar elements between different types of work. It is also based on the fact that there are common or similar elements between different types of vocations, especially those belonging to the same general division, as agricultural, clerical, industrial, or professional.

The other definition is narrow and defines vocational education as specific training in a particular vocation. This definition denies all

transfer of training and insists that if training is to be effective it must be intimately related to life situations.¹

The former broad definition was instrumental in introducing manual training into the secondary schools during the latter half of the nineteenth century as a formal discipline subject. The proponents believed that the faculty theory was the explanation of the transfer of training, as, for example, if one learned to use a wood plane the skill acquired would aid him in operating any and all types of tools. Modern psychologists have definitely shown the existence of transfer but no longer hold to the faculty theory as an explanation.

Aid given to secondary schools by the Federal government for vocational training defines vocational training in its narrowest sense. In the Statement of Policies for the Administration of Vocational Education it is defined as follows: ²

To the extent that it is subsidized by the Federal government under the Vocational Education Acts, vocational education has reference to training for useful employment. It may be given to boys and girls who, having selected a vocation, desire preparation for entering it as trained workers. . . . [The rest of the definition refers to those already in employment, and adults.]

This definition stresses the term "having selected a vocation," which means that the training is not vocational until such selection is made and that the pupil must select a single, narrowly defined occupation rather than a broad group of vocations. In the present discussion, the broad definition of vocational education will be employed.

THE PLACE OF VOCATIONAL EDUCATION IN THE SECONDARY SCHOOL

The place of vocational education in the secondary school is not definitely established. That it has its place as one of the cardinal principles of secondary education but this does not answer such questions

¹ For a more complete discussion of these two definitions of vocational education see John Dale Russell, *Vocational Education, Staff Study 8*, prepared for the Advisory Committee on Education, U.S. Government Printing Office, Washington, D.C., 1938, pp. 9-14.

² Statement of Policies for the Administration of Vocational Education, *U.S. Office of Education Vocational Education Bulletin 1*, 1937, p. 6.

as "How much vocational training should be offered?" "In what grade should vocational training begin?" "How much emphasis should be placed upon the acquisition of specific skills as contrasted with a general training basic to many vocations?"

There are many differences of opinion concerning the answers to these questions. Specific vocational training for vocations other than the professions was not a problem until after the high school became more democratic and the population increased. The influx into the high schools of millions of youth who were not planning to attend college and who would enter industry immediately following graduation called for a modification of the curriculum to meet their needs. Likewise, the increased number brought into the school many who were unable to profit by the traditional academic curriculum. Vocational education has been suggested for these groups.

Many educators believed that the inclusion in the curriculum of vocational education was the answer to the problem of what to do with those not possessing ability in academic and classical subjects and that although they lacked a high degree of mental ability they could be trained manually. Recent developments have tended to change this older idea. The training of those of a lower level of ability will be discussed later in this chapter.

Many taxpayers, not aware of the manifold task of the high school, expect that after four years of training their children should be specifically fitted for some particular vocation. As an example of this, a business executive, in an address which was published in the local papers, claimed that thousands of business concerns were idle because they did not have trained workers to fill positions, mainly because the high schools did not train workers for them, and that, therefore, the high school's failure was largely responsible for the large amount of unemployment. This criticism, of course, is absurd, but it reveals the attitude of some parents and taxpayers. Many educators, recognizing this demand, have prophesied that if the high school does not offer more vocational education the taxpayers will cease to support it.

On the other hand, the complexity of present-day society demands a program of common learnings which almost fills the curriculum. The formal subjects, such as the social studies, science, mathematics, and English, have been expanded to include many new topics, as consumer

education, safety education, conservation of natural resources, and, as shown in a previous chapter, all pupils need courses in physical education, music, art, home arts, and industrial arts. These requirements are forcing specialized subjects of a vocational nature into the last two years of the high school, or even the junior college, and the belief is growing that the general high school should not attempt any particular vocational training, especially the development of specific vocational skills.

What, then, is the mission of the high school with respect to vocational efficiency? This mission is fourfold:

1. To provide exploration and guidance.
2. To develop vocational flexibility.
3. To give a sound basis or general training which is valuable in any vocation.
4. To give to those who, in all probability, will enter industry immediately after graduation some training which will enable them to advance more rapidly in certain fields of work after entering them.

These functions of vocational training *definitely preclude the early selection of a particular vocation and the giving of specific training in it to pupils in the secondary school*. A discussion of these four phases follows.

Providing for exploration and guidance. The discovery of individual interests and capacities, the testing of aptitudes, the prediction of probable vocational success in various fields, and the guidance and direction of pupils toward worthy goals most congruous with their potentialities is one of the functions of secondary education and the first step in developing vocational efficiency. This phase consists in making the pupil acquainted with himself; the next is that of acquainting him with the world of work, industry, and commerce. No elaboration will be given here of how these functions are accomplished, for a separate chapter is devoted to them.

Developing vocational flexibility. If society never changed, if there were no advances in the technological world, if pupils were born, lived, and died in the same place, if our methods and techniques of providing basic needs remained static, then there would be no need for vocational flexibility. It is a pathetic situation when one trains

specifically for some vocation and then, through circumstances beyond his control, cannot pursue it. If the high school were to give specific vocational training, such cases would be common. Pupils must be taught to adapt themselves to a changing world, rather than to live in a stagnant one.

Giving a foundation for any vocation. The subject matter selected for instructional purposes in secondary schools should be of value in any vocation, for with the right foundation the specific skills in most occupations can and should be learned by the apprenticeship method in actual situations. Pretraining on the secondary-school level in the skilled trades is not very effective and takes time which should be devoted to larger aspects of social and economic training. The specific skills required in the skilled trades are numerous and require some time to be learned. Those involved in manual labor, because of the division of labor in modern industry, are few, are specific, and may be learned after a position has been secured in a few days or a few weeks at the most.

Many elements are common to a great variety of occupations, or are highly desirable in all of them, and at the same time have personal, social, and cultural value as well. An examination of the general curriculum of a modern high school reveals that the following outcomes are possible of achievement by all pupils pursuing it. These are either necessary or highly desirable in any vocation:

1. A reasonable command of English, reading, writing, and speaking.
2. A knowledge of and skill in the fundamental principles of arithmetic.
3. A knowledge and understanding of laws and principles of elementary science.
4. A healthy mind and body.
5. Desirable social attitudes.
6. An understanding and appreciation of the importance and purpose of social and economic institutions.
7. High moral standards and ethical character.
8. Habits of industry, thrift, promptness, and resourcefulness.
9. An ability to adapt oneself to a changing environment.
10. A knowledge of the world of work, its importance, and the economic dependence of man.
11. A respect for honest labor regardless of its social and economic level.

There are, of course, a few of these which are not highly essential to certain vocations, such as manual labor. An examination of these outcomes will reveal that they are just as valuable in general citizenship, home membership, and in one's social, religious, political, and economic life as they are in his vocational life. It is reasonable to expect that there is some work or some place in society for every individual (excepting the mental defectives) and that every individual can and should attain the outcomes included in this list as basic needs in all occupations.

Providing vocational training for those who will enter industry after graduation. Some specific vocational knowledge and skills are basic to broad fields of work, that is, the skills are not peculiar to one occupation, but to a class of occupations or vocations. For example, agriculture is a class name for hundreds of occupations, spread over the United States. The same is true of home economics, industrial arts, and business education. Although training in these fields is limited in its universality, it is nevertheless sufficiently broad to justify giving training along these lines without doing violence to the principles previously established. Furthermore these fields, namely, home economics, industrial arts, business education, and agriculture, have social and personal value as well as vocational, which is an additional reason for their inclusion. They contribute to the exploratory function of secondary education, help provide for individual differences, and contribute to worthy home membership, leisure-time activities, citizenship, and command of fundamental principles.

Vocational training of a specific job character, however, is not a commendable method of developing an understanding of economic life or effective participation in it, for the routine performance of skills does not further these understandings. In its true and broader meaning it is not education but training. The latter places the emphasis on the learning of a few definite facts and the acquisition of specific skills to the neglect of concepts, generalizations, attitudes, and appreciations essential to complete living in present-day society.

It has been estimated that the percentage of jobs requiring little or no preliminary training constitutes 75 to 95 per cent of all occupations and that 95 per cent of those requiring skilled training are trained on the job by foremen. These facts indicate clearly that the high schools

need not be concerned with specific vocational training in a strict sense.⁸

Providing work experience. One of the most effective ways to introduce youth to the vocational world is that of encouraging or even requiring them to secure work experience. Such experience supplements courses in vocational education and provides training which cannot be attained in any other manner.

There are several plans for providing the experience: (1) The school may employ students on a part-time basis to help do the necessary work of operating the plant, such as cleaning and caring for lawns, aiding the janitor, helping in the library, or doing clerical work in the administrative office. Since this work is not a part of normal class activities, students should receive pay for it. (2) Pupils may be aided in securing afterschool employment in the community or urged to secure work by their own efforts, for which they receive pay. (3) They may engage in school and community services for which no pay is received.

Work experience, if coordinated with schoolwork, has educational value and becomes a valuable part of the total school experiences in which pupils engage. Such a program should be in every school, but not necessarily for every pupil.

Where should specific vocational training be given? For centuries, civilized man has given productive workers some form of training, either in a system of schools for the professions or through apprenticeships controlled by guilds, tribal customs, unions, and corporations. America has never had more than fragments of a good apprenticeship system. The great majority of America's skilled workers did not receive their training through vocational schools or an efficient apprenticeship system but learned their skills through self-instruction by the trial-and-error method, which often resulted in insecurity, a poor foundation, and inefficiency. There are a few skilled vocational groups, such as printers, plumbers, silversmiths, locomotive engineers, and barbers, which have well-organized apprenticeship systems, and farms have been the training ground for the majority of farmers. There are many vocational schools of a private nature, such as the commercial

⁸ Homer P. Rainey, "The Needs of American Youth: What the American Youth Commission Has Found," p. 177, American Educational Research Association, Washington, D.C., 1938.

schools, and many of a mechanical nature, and there are some public vocational schools on the secondary level.

The present trend is for educators and leaders to look to the public school as the most logical and efficient agency for the general training of productive workers. To many persons, vocational training is not considered so desirable and attractive as general, classical, and cultural education, for one's cultural, religious, political, fellowship, and family life are all more attractive than his vocational life; and of the various vocations those of a professional nature seem to be more attractive. This partly accounts for the reluctance of secondary schools to include training for vocations other than the professions, which were not even considered vocational in nature. The acceptance of this aim was hastened through popular demands rather than a desire on the part of educators.

After its first acceptance, many poor practices were followed:

1. The schools guided those of low ability into vocational courses.
2. Training in specific skills for particular vocations was given.
3. Pupils were trained in fields in which they could not secure employment after graduation.

Federal aid for vocational education. During the years 1900 to 1910, as the United States continued to grow industrially, certain organizations such as the National Association of Manufacturers and the National Metal Trades Association, certain agricultural organizations, the American Federation of Labor, and the National Education Association urged that the facilities for vocational training in public schools be extended and training be provided under public auspices.*

The Smith-Hughes Act of 1917 and subsequent acts of Congress were outgrowths of this movement. The Smith-Hughes Act provided for the appropriation to the various states the sum of \$1,660,000, to be increased gradually each year until 1926, when \$7,167,000 would be appropriated annually. These funds were to be used to reimburse the states to the extent of, but not to exceed one-half, the salaries of teachers, supervisors, and directors of vocational education in agriculture, trades, and industries. Home economics, being defined as a vocational subject, was considered a part of the trades and industries

* Russell, *op. cit.*, p. 16.

program and was not to receive more than 20 per cent of this allotment.⁵

In 1929, Congress passed the George-Reed Act authorizing additional funds to supplement the Smith-Hughes Act, which extended to 1934. The George-Ellzey Act authorized appropriations amounting to \$3,000,000 annually until 1937. Anticipating the expiration of the George-Ellzey Act, in 1936, the George-Deen Act was passed, which increased the annual appropriations from \$7,302,000 to \$21,785,000. Besides the increased funds, the fields of distributive occupations and public service were added to the list of vocations worthy of Federal aid, and the requirement that the states must match the Federal funds during the years immediately following the enactment of the law was removed.⁶

From 1940 to 1944, the Federal government appropriated sums each year to aid schools of less than college grade in teaching occupations essential to the national defense and refresher courses for workers preparing for such occupations. Appropriations were made for equipment as well as for supplies.

The George-Barden Act. An appropriation to continue the regular program which started with the Smith-Hughes Act of 1917 was made in 1946 and is known as the George-Barden Act. In brief, the act provides that beginning in July, 1946:

1. Ten million dollars is to be appropriated annually for vocational agriculture.
2. Eight million dollars annually is to be appropriated for home economics.
3. Eight million dollars is to be appropriated annually for vocational education in trades and industries.
4. Two and one-half million dollars is to be appropriated annually in distributive occupations.

These funds are made available to the various states and territories provided they choose to match all funds allocated to them. They are in addition to and subject to the same conditions and limitations as the appropriations made to carry out the Smith-Hughes program with the exceptions that funds may be used to pay the salary and

⁵ *Ibid.*, p. 17.

⁶ *Ibid.*, pp. 21-22.

travel expenses of a state director of vocational education and for vocational counselors. Funds may also be used to supervise and help train vocational counselors employed in the high schools of the state.

In operation, the various states make plans for vocational education which are submitted to the Vocational Division of the U.S. Office of Education. When approved, the Federal government reimburses the states for money spent in carrying out the plan on the matching basis. The number of high schools in which a counselor may be located will depend upon the size of the school, availability of local funds, and the number of trained counselors available.⁷

Students enrolling in any of the courses subsidized by the Federal government must have selected a vocation and desire preparation for entering it as trained workers. Industrial arts is not included in this program, for it is largely an exploratory type of course and qualifies more as general than as vocational education.

Veterans' training program in secondary schools. Public high schools have a part in the veterans' training program. Working through state departments of education, various schools which are designated by them as training institutions may activate a veterans' training program, of which there are three types: (1) cooperative trade and distributive, (2) cooperative agriculture, and (3) institutional.⁸

Cooperative Trade and Distributive. This program is one in which a veteran spends a minimum of 36 hours per week in on-the-job training and a minimum of 4 hours per week in organized, systematic, related instruction given under the direction of the local school authorities during hours when he is not employed. The program is open to any veteran with 90 or more days of service who may continue until he has acquired a proficiency sufficient to hold a job with a firm. The school is reimbursed for each veteran and is given an additional amount, not to exceed certain limits, for equipment and supplies. The veteran receives subsistence pay, not to exceed certain limits, from the Federal government while in training. The reimbursing is done through the state departments of education.

If related courses are offered in the high school as a part of the regu-

⁷ L. H. Dennis, New George-Barden Act, *Industrial Arts & Vocational Education*, 35 (November, 1946), p. 18A.

⁸ Maris M. Proffitt, *Secondary School Programs for Veterans*, *School Life*, 28 (July, 1946), pp. 7-8.

lar curriculum, the veterans may enroll in them; if not, special courses are organized for them which meet after the regular school hours. For these courses, regular high-school teachers or part-time teachers from the community may be employed. The courses offered depend upon the types of trades or distributive work the veterans are learning, as, for example, mechanics, electricity, general shop, business arithmetic, English, psychology, or salesmanship training.

Cooperative Farm-training Program. Any school with an active vocational agriculture department may offer cooperative farm training. Veterans who desire such training must secure proprietorship of a farm of an approved size and with sufficient equipment for successful operation. The school may then offer instruction in agriculture to such veterans as may desire it if the class size is as great as 24. In this program the vocational agriculture teacher not only gives on-the-job training, but also related training at school.

Institutional Training. Any school enrolling veterans who have not completed high school will be reimbursed for tuition and fees for each one enrolled directly through the Veterans Administration.

Evaluation of the Federal aid program. Federal aid for vocational education was originally planned as a cooperative enterprise between the state and Federal government; but in actual practice Federal control has operated to shape very definitely the vocational programs of the states, and, in some cases, this has resulted in a dictated program. The existing situation could be greatly improved by giving more local and state initiative, by making the vocational training an integral part of the regular school system, and by removing the control over the preparation of teachers. These changes would remove the dual control over the schools and eliminate an almost parallel system between general and vocational training.

The Federal government under the present system is fostering a narrow, specific type of training by giving aid to a special group of teachers. There is no reason why the two types should not be merged and the Federal funds given to promote all secondary schools, rather than being definitely marked and designated for certain purposes.

The method of apportioning funds to the different states on the basis of matching Federal by state funds is a good stimulus, but it creates greater rather than less inequality, for it is the poorer rural districts

which need the most help, but which are least able to raise funds for matching.

A further summary of the Advisory Committee's evaluation of Federal participation in vocational training includes the following:

1. A limited concept of vocational education has been promoted.
2. In some of the financially less able communities funds have been diverted from general education.
3. A creation of a dual school system has been encouraged.
4. The difficulties of administering local schools have been increased.
5. An attitude of separateness has developed among those in the field of vocational education.
6. Guidance and placement services have been inadequately provided.
7. Enrollment has been permitted without consideration of the potential demand for new workers in the trade for which it is given.
8. Apprenticeship should be encouraged as a method of vocational education.
9. The service of the schools in supplying vocational education for occupations of the trade and industrial types should be chiefly to cultivate in the pupils a broad range of basic abilities of value in a large related group of occupations.
10. Federal appropriations for vocational education should not be increased until there has been a relatively generous provision of funds for general education.⁹
11. Estimates indicate that less than 1 per cent of those entering farming have had four years of college work in agriculture, which indicates that most of the farmers must be trained through the secondary school period or through adult educational agencies. At the same time 65 per cent of the high schools in rural areas do not offer the program of vocational education in agriculture because it is too expensive for them to meet government standards. This percentage includes about 10,000 rural high schools which cannot avail themselves of the reimbursed program.¹⁰

Training for various levels of ability. Individual differences among pupils in mental ability, aptitudes, and interests are great. To meet these differences, the curriculum should be enriched through appropriate classroom techniques and through electives. The general curriculum of constants prescribed for all pupils is needed by all, and pupils of all

⁹ Russell, *op. cit.*, pp. 237-240.

¹⁰ *Ibid.*, pp. 150-151.

levels of ability found in secondary schools may profit by these activities.

To assume that those who could not profit by the academic courses should be given manual and vocational training is assuming that these types of courses require less ability, or a different type of ability, which is contrary to the usual findings. With few exceptions, abilities are rather uniform, so that if one is unable to profit by the academic subjects, he usually does little better in vocational subjects. Those of inferior ability are not likely to become skilled craftsmen, for in the skilled trades the amount of related information and skills required is far greater than the necessary manual skills. The implications of these statements are that vocational subjects should not be made the dumping ground for pupils of low abilities and that, after their interests and capabilities have been determined, they should be guided into the selection of electives commensurate with them.

The attitude of labor toward prevocational training on a secondary-school level. According to a survey made by Broach and Parker for the Advisory Committee on Vocational Education,¹¹ labor formerly sponsored vocational education in public schools as opposed to such training in private schools organized for profit. Recently, after several years of experience with the product of vocational schools, labor has adopted a new attitude. A few quotations from the report will reveal this attitude with respect to courses in trades and industries, but not toward home economics and agriculture, for industry has had little contact with home arts and agriculture:¹²

As a method of recruitment for the skilled trades, the all-day trade school at the high-school level is well nigh a failure. It operates without definition of responsibility either to industry or to adult labor already engaged in the trades. . . .

The skills of the manual trades can be learned only through doing. The technical knowledge necessary to the all-around modern craftsman must be acquired in definite integration to the training on the job.

Various groups representing labor have expressed similar views. There seems to be general agreement among them that the vocational training received in high school is inadequate, that apprentices should

¹¹ *Ibid.*, p. 246.

¹² *Ibid.*, p. 260.

not be trained in public schools, and that employers prefer either those who have had academic training along with their vocational training or those whose preparation has all been along academic lines.

There are two main reasons for these criticisms:

1. Schools on the secondary level cannot train mechanics, engineers, or any skilled tradesmen. Too often teachers have led pupils to believe they could train them into finished products, giving the pupil an erroneous idea of his own status when graduated.
2. Even if the schools could produce skilled tradesmen, it is doubtful that they should, for it would require too early specialization and special training at the expense of broad general training in economics, aspects of the employment situation, modern labor relationships, collective bargaining, and various other social factors affecting their welfare. Likewise, the full time of the secondary-school years is needed for pupils to explore their own potentialities and learn something about the world of work.

The task for vocational education. The task for vocational education in the years ahead is that of helping to meet the needs of various classes and types of youth:¹⁸

1. Veterans returning from service who want to prepare quickly for a vocation and to receive aid in securing employment.
2. Regular high-school pupils who need basic training and guidance.
3. Refresher courses for those who wish to continue in some field but who took beginning courses several years before.
4. Persons who have been displaced because of shifts in employment and because certain vocations have become obsolete.
5. Employed persons who want to study related courses so as to advance more rapidly.
6. Youth who normally would have been in school but due to certain reasons had dropped out and who have been encouraged to return.
7. High-school graduates who have entered employment and desire post-graduate courses in vocational subjects which they did not pursue while in school.

If college enrollments continue to increase or even maintain their present levels, the number of high-school pupils intending to go to college will be larger than it has been in the past. This means that the

¹⁸ See *Vocational Education in the Years Ahead, A Report of a Committee to Study Postwar Problems in Vocational Education, Federal Security Agency, U.S. Office of Education Vocational Division Bulletin 234, 1945*, pp. 50-83.

number intending to pursue skilled trades and engage in manual labor will be smaller. The percentage of high-school graduates attending college is increasing, but the majority of high-school students still are in the noncollege group. If the high schools are justified in meeting the needs of the college-preparatory group, then consideration should be given also to the others. Over and above academic training which is basic to any vocation, common elements can be found in skilled trades and manual labor which should be taught in subjects usually designated as vocational in nature. Some of these will be presented later in this chapter under the various vocational fields.

Students who have definitely selected a vocation such as agriculture may be given more specific training even though they may be in a class with others who will not enter the area as a vocation. On the other hand, many students enrolled in vocational classes have no intention of following the subject as a vocation but are taking the course as a part of their general education. This means that individual differences will have to be considered within the class and the course adapted to meet their needs.

Principles of vocational education. In the light of the previous discussion several principles may be stated which may serve as a basis for building a program meeting the vocational needs of all youth:

1. The majority of all high-school time should be devoted to general and academic subjects. About two-thirds of these should be required and the rest elective. The electives may be selected on the basis of providing some general vocational training.
2. All specific training in a particular vocation should be given by the apprenticeship system after youth has entered industry.
3. All preemployment training of a specific nature should gradually be placed later and later in the curriculum until finally it is eliminated entirely. The United States is gradually removing youth from industry and placing them in schools, so that one may reasonably anticipate that soon a general secondary education will be given to all youth before vocational training begins.
4. The selection of elective subjects which are of a vocational nature should stress the development of knowledge and judgment rather than skills. The training should be so general that all outcomes will be widely applicable to a variety of occupations, and these should be of a type the pupils will have an opportunity to enter. Only those occupations which have a high social value should be considered. Following these principles,

courses in agriculture, home arts, industrial arts, and business education may be offered as electives.

5. If vocational subjects are so selected and so organized, they will have social, economic, and personal value as well as vocational. They will further the general aims of secondary education, and registrations and credits should not be restricted in vocational subjects any more than in other elective subjects.

HOME ECONOMICS, OR HOMEMAKING EDUCATION

Homemaking education is offered in approximately two-thirds of all public secondary schools of the United States. The number of students pursuing courses in this work has increased rapidly since it was first aided by the Federal government in 1918. Enrollments are higher than in any of the other vocational subjects. It is estimated that, in 1949, about one-fourth of all students were enrolled in home-economics classes. Since few boys were enrolled, this means that approximately half the girls were. This is an increase of 14 per cent over 1934 enrollments.

It is a course to prepare one for effective home life and includes instruction in financial planning, in management of time and energy, in human relationships, and in the mechanics of housekeeping.

Content of homemaking courses. Trends in homemaking courses reveal a tendency to integrate the general with the vocational types of courses. The major types of activities of both general and vocational types of courses are:¹⁴

1. Selection, preparation, serving, conservation, and storage of food for the family.
2. Selection, care, renovation, and construction of clothing.
3. Care and guidance of children.
4. Selection and care of the home and of its furnishings.
5. Use and conservation of home equipment.
6. Maintenance of health.
7. Home care of the sick, including first aid.
8. Selection and purchase of food, clothing, equipment, and furnishings.
9. Management of human and material resources available to the home.
10. Maintenance of satisfactory family relationships.

¹⁴ Homemaking Education in Secondary Schools of the United States, U.S. Office of Education, 1947, p. 1.

Objectives. The objectives of homemaking courses are becoming more liberal. Preparation for homemaking is the most widely accepted objective, and the basic goal is to help the individual to live a more useful and satisfying personal, family, and community life. More specifically, the objectives are to help individuals to:¹⁵

1. Make more efficient use of available resources.
2. Acquire skills in managing a home and take part in home activities.
3. Establish a wholesome attitude toward other people through satisfying experiences with them and their families.
4. Adjust to changes in their personal lives.
5. Improve their health through an understanding of what constitutes good health and the practices and habits that contribute to it.
6. Experience a sense of accomplishment through knowing how to do work well.
7. Be more attractively groomed and well mannered.

General principles. The particular phases of homemaking education to be included in the curriculum should be determined after a survey of the community and its peculiar needs. Such a survey would include the types of homes in which pupils live; the facilities in the homes for cooking, sewing, and cleaning; the type of fuels used for heating, cooking, and lighting; the prevalence of machines or hand labor for doing housework, as sewing, washing, or sweeping; and the methods of preserving foods. Community resources should be utilized in the school and interests and needs recognized. Much of the course can be built about home and community problems. These are problems in which a pupil shows an interest and attempts to solve under the guidance and help of the teacher as a regular part of the course. This provides an excellent method of integrating the work of the school and that of the community and also makes the curriculum more meaningful, for pupils will be engaging in real experiences, and real materials will be encountered in everyday living.

From such a community survey, specific objectives may be determined and a series of activities selected which are designed to meet them. These may then be organized into learning units for instruction. Evaluation and modification of these is a continuous task.

¹⁵ *Ibid.*, p. 3.

AGRICULTURE

Since the Smith-Hughes Act of 1917, there has been a decided increase in pupils taking courses in agriculture. The majority (91 per cent) of all pupils are enrolled in federally reimbursed programs. In the nonreimbursed programs, the courses are not so vocational in character as the federally aided ones, although the content is not materially different.

Agriculture is less universally applicable for high-school pupils than either home economics or industrial arts. It is a false idea that rural youth should all receive instruction in agriculture, for many have no desire or aptitude for farming; likewise it is an erroneous assumption that no urban boys would be interested in this work. Agriculture courses as generally taught have little appeal or functional value to boys other than those who have a strong inclination toward farming or some phase of leadership work in agriculture. For this reason, it should be a pure elective offered in the ninth to twelfth grades.

If agriculture is taught from a nonvocational standpoint, it possesses possibilities of enriching the lives of millions of youth who do not desire to pursue agriculture as a vocation. The course, on this basis, should help create a better understanding and more toleration between rural and urban people, present problems unique to rural people, and give urban youth some idea of where their food comes from. From a more practical side, the course should contribute to more knowledge of business, trade, barter, and marketing and, for those in small towns, practical knowledge which would be of value in operating small gardens, maintaining lawns, and caring for domestic animals.

Content of agriculture courses. Since the depression of the early 1930's, there has been a shift in emphasis in agricultural instruction from production to problems of marketing, buying, soil conservation, land management, and economics. Over and above the acquisition of knowledge concerning agricultural methods, instruction is now given in how to market farm produce. Less emphasis is placed on developing certain specific skills which may never be used or, if needed, may be acquired later.

Future Farmers of America and 4-H clubs. Future Farmers of America, commonly referred to as the F.F.A., is a national organization of pupils and former pupils enrolled in vocational agriculture courses. It is sponsored by local teachers, state boards for vocational education, and the U.S. Office of Education. Membership is not open to all pupils enrolled in agriculture classes but depends upon the degree of advancement and achievement. Boys may retain membership for three years after leaving school. The clubs emphasize recreational and educational activities.¹⁶

An older organization sponsored by the Cooperative Agriculture Extension Service of the U.S. Department of Agriculture is the 4-H club.

According to an advisory committee appointed to formulate policies for vocational education, these two organizations have been to some extent competing with each other. The F.F.A. was established because teachers of vocational agriculture are not authorized to cooperate in the leadership of the 4-H clubs, particularly those including boys under 14 years of age, for the Smith-Hughes Act set a minimum limit of 14 for participation in the program. A final reason was a desire on the part of those pursuing specialized courses in agriculture to have a national organization of their own.¹⁷

The advisory committee was not wholly in favor of the organization of the F.F.A. Some of the objections to it are that it violates accepted principles of club work in high schools. It is a national organization rather than local, and there is danger of its being used for purposes of propaganda and publicity. The development of alumni chapters might constitute a source of interference with local administration of the schools.¹⁸

TRADE AND INDUSTRIAL EDUCATION—VOCATIONAL

Trade and industrial-education courses, which are usually offered as electives in the last two years of high school, are more vocational in nature than courses in industrial arts, which are a part of general

¹⁶ Statement of Policies for the Administration of Vocational Education, U.S. Office of Education *Vocational Education Bulletin 1*, 1937, p. 146.

¹⁷ *Ibid.*, p. 147.

¹⁸ *Ibid.*, p. 148.

education, although they do provide additional courses in industrial arts for those showing ability and interest. They are usually federally aided, while industrial-arts courses are not.

Although industrial-education courses are usually considered vocational in nature, they have great prevocational value, especially for those who will enter industry as soon as they leave school, and for those who are more interested in mechanical than in academic subjects. The courses should also continue to further the exploratory function of the school and help coordinate work taken in other courses, as mathematics, science, art, and drawing.

Industrial-education courses even of a vocational nature should not be limited to those who in all probability will select a vocation which is related but should be open to all those who desire to enroll. Many students desire further knowledge and skill in electricity, wood- and metalwork, automobile mechanics, and other fields, not for vocational purposes, but for home use and for hobbies.

Purposes of trade and industrial education. Nine purposes of industrial arts which can be used as goals to help direct teachers are to develop in each pupil:

1. An active interest in industrial life and in methods and problems of production and exchange.
2. The appreciation of good design and workmanship and the ability to select, care for, and use industrial products wisely.
3. The habits of self-reliance, self-discipline, and resourcefulness in meeting practical situations.
4. A readiness to assist others and join happily in group undertakings.
5. Desirable attitudes and practices with respect to health and safety.
6. A feeling of pride in his ability to do useful things and to develop worthy leisure-time interests.
7. A habit of an orderly, complete, and efficient performance of any task.
8. An understanding of drawings and the ability to express ideas by means of drawings.
9. A measure of skill in the use of common tools and machines and an understanding of the problems of construction and repair.

An examination of these nine purposes reveals that specific training in skills required in a particular vocation is not one of them but that all of them contribute to a general pattern of vocations of an

industrial nature. At the same time, many pupils may develop specific skills for a vocation already selected, either those entered directly, or those for which further education beyond high school is needed. Some of the latter group are engineering, printing, photography, radio work, or mechanical work.

Principles of trade and industrial education. Trade and industrial education must be developed in accordance with a composite philosophy evolved from the experience and best thought of employers, labor, and vocational educators. Such a philosophy would embrace such fundamental ideas as the following: ¹⁹

1. Offerings in the program should be broadened to include a wider range of trades and occupations. These should be made on the basis of the individuals and the availability of employment opportunities.
2. All youth who desire training and who can profit by it should have an opportunity to secure instruction which will prepare them "for specific trades and industrial pursuits." The programs would include all-day preparatory and cooperative courses and various forms of part-time training. In smaller schools it is more practical to provide for cooperative part-time diversified occupational training.
3. Adequate guidance and counseling should accompany the programs and should be available to both youth and adults.
4. The training must be adapted to provide training for the youth who will become routine workers in industrial and business establishments. These youth should receive training designed to develop desirable work habits and attitudes and an understanding and appreciation of citizenship responsibilities.
5. Certain phases of industrial training can be given only on the job. Just which phases the school can do should be determined. Training in skilled occupations should be organized so that the worker receives his practical training on the job and his related and technical instruction in school.
6. The trade and industrial education program should extend the in-school training of youth because it is likely that the age of entrance of youth into industry will be advanced. The trends are to raise it in the future more than has been done in the past.
7. The vocational industrial education program and the industrial-arts program should be coordinated. Vocational education prepares youth for

¹⁹ Vocational Education in the Years Ahead, A Report of a Committee to Study Postwar Problems in Vocational Education, Federal Security Agency, U.S. Office of Education Vocational Division Bulletin 234, 1945, pp. 282-284.

advantageous entrance into a trade or industrial pursuit; industrial arts, among other things, develops some appreciation of industrial processes. The industrial-arts program will provide more exploratory experiences for youth; the trade and industrial education program provides an opportunity to pursue courses further.

8. Some provision should be made whereby all youth may secure organized and controlled work experience. Here they may develop work habits, learn to get along with others, and acquire an adequate sense of values through actual experience.

9. Trade and industrial education programs should provide an opportunity for all to keep on growing or keep up-to-date because of the rapid changes in industry.

10. Industrial education should be open to those who desire to pursue them for values other than vocational.

All these principles preclude an early selection of a specific vocation and recommend more exploration, guidance, and flexibility. Since industrial arts is designed more for this type of training, and since it is an expensive unit because of the large amount of equipment required, the Federal government should subsidize it as well as courses in agriculture, trades, and industries.

BUSINESS EDUCATION

Business education, formerly known as commercial education, is rapidly changing complexion. No longer is it considered primarily a course designed for those who will enter industry or a course from which businessmen can secure clerical helpers trained at public expense. The name has changed, additional objectives have been added and the old ones revised, the course has expanded to meet present conditions, and consequently the business curriculum is gaining prestige which gives it a place and status on a par with other curricula of the secondary school. Partly as a result of these changes, and as a cause of the changes, business education is rapidly expanding, as shown by the increased number of schools offering it and the large number of pupils pursuing courses in this field.

Past status of business education. Commercial education is by no means a new part of our educational program. As easily as 1635, Plymouth Colony engaged a Mr. Morton to teach children reading, writing, and cost accounting. Business subjects, such as arithmetic,

accounts, and history of commerce, were taught in Franklin's academy, but as the Latin grammar school declined and the academy turned its attention from the "great aim and real business of living" and became a college-preparatory school, interest in business education declined.

Commercial training was received in private commercial colleges and did not receive much attention in public schools until about 1880 to 1890, when the high school started on its period of rapid growth. Commercial subjects found their way into the high school through popular demand, and the curriculum was borrowed from private business colleges. The aims were strictly vocational, and the courses consisted mainly of shorthand, bookkeeping, and typewriting. In the past, there were several factors which caused commercial subjects to be unpopular. The general public was demanding more practical subjects in the high school, but teachers were slow to accept them, for they clung to the traditional classical curriculum. College-preparatory pupils viewed the commercial pupils condescendingly, and teachers viewed the course as a good place to dispose of those who could not profit by the academic curriculum. Finally, the reluctance of colleges²⁰ to accept commercial subjects for entrance was an impediment to their progress.

The demand for clerical help and stenographers, together with a demand by parents for more vocational training, increased the popularity of commercial subjects, and to make them still more attractive, the curriculum was expanded and the aims changed. Part of this change was due to the fact that many who completed the commercial course could not secure employment with the skills they had acquired, and since the courses were designed purely for vocational purposes, the time was considered wasted. Teachers became conscious of the fact that although the high school must give vocational training, it must not lose sight of its mission in society, namely, to prepare individuals for social efficiency, rather than for individualistic vocational efficiency. The school does not exist solely, and perhaps not primarily, for the benefit of those who are being educated; certainly much of its mission is to benefit society as a whole.²⁰

Present status of business education. The present trends in registration in business subjects and in the number of schools offering such

²⁰ Harl R. Douglass, Expanding Business Education to Meet Present Conditions, *Business Education World*, 18 (September, 1938), pp. 19-22.

subjects show an increased popularity. The four business subjects offered most frequently in high schools and attracting the greatest number of pupils are typewriting, bookkeeping, business arithmetic, and general business. Besides these four courses, high schools are offering economic geography, shorthand, salesmanship, business correspondence, economics, and business law.

The total enrollment in business-education subjects was 60 per cent of total enrollments in 1949. Approximately one-half of all ninth-grade pupils are taking typing, and a few schools are offering the course in the seventh and eighth grades. New subjects appearing are cooperative store training, office training, retailing, and consumer economics.²¹

Aims of business education. As mentioned previously, the aims of business education have broadened. They have become more social and less individualistic, and *education* is being substituted for *training*. Training is limited to the learning of definite basic facts and to the acquisition of basic skills needed for vocational efficiency. Education includes these but aims further by including the development of concepts, ability to generalize, and the development of desirable social attitudes, ideals, appreciations, and respects. Education includes all phases of one's development; training, only one. Besides securing specific training for definite vocations, such as taking dictation in shorthand, operating a typewriter and keeping books, vocational education aims at teaching pupils to become flexible in their vocational capabilities, to become familiar with and be able to think about economic and business problems, to gain an understanding and appreciation of economic institutions, and to develop economic intelligence. Even such subjects as bookkeeping, typewriting, and business arithmetic, formerly thought and taught to have vocational values only, are widely recognized and taught for such other values as worthy home membership and personal and social efficiency.

Formal statements of the general aims of business education which appear in publications and courses of study are:²²

²¹ Offerings and Enrollments in High School Subjects, Biennial Survey of Education, 1948-50, *U.S. Office of Education*, 1951, pp. 21-22.

²² James Grant, Administration of Commerce Courses in High Schools and Colleges, *Modern Business Education*, 5 (March, 1939), p. 4.

1. To prepare youth to meet their personal needs as consumers.
2. To provide youth with a background of information which will enable them to perform their citizenship duties more effectively.
3. To train youth for a vocation.

Scope of business-education courses. As in other secondary-school curricula, business education cannot give a complete preparation for a career. Business-education courses have the same vocational value as other courses with a more specific vocational aim. These values are:

1. To provide exploration by giving pupils an opportunity to discover interests, capacities, and vocational opportunities.
2. To provide preliminary preparation for a business career that will enable one to have greater advantages for promotion and better prospects for ultimate success than those who enter business careers unaided by such training.
3. To provide for vocational flexibility.

Social and personal values are derived from instruction in principles and practices of everyday business relationships that will aid one in conducting his own business activities in a manner satisfactory to himself and to society.

Every individual has dealings with or is benefited by economic institutions, is dependent upon trade and commerce, engages in barter and trade to secure the necessities of life, and comes in contact with economic institutions and agencies almost daily, such as banks, wholesale and retail stores, insurance companies, the stock market, the "farmer's" market, and the mediums for exchange such as money, checks, bonds, stocks, mortgages, and produce. Knowledge of these institutions and skill in performing economic activities provide a background for many vocations and are essential from a personal and civic point of view. For these reasons, the courses are justified in public schools.

Distributive education. The Federal government does not aid business education directly but does aid in a program of distributive education in which business-education teachers take part. One of the provisions of the George-Barden Act is "to promote vocational education in the distributive occupations."²⁸ Distributive occupations are

²⁸ Tentative revision of U.S. Office of Education Vocational Education Bulletin 1, 1947, Sec. III, p. 1.

those followed by workers directly engaged in merchandising activities, or in direct contact with buyer and seller, or in managing or operating a commercial service. Federal aid is given for conducting classes in a vocational distributive subject or in a related distributive subject.

A vocational distributive subject is one that involves a discussion or presentation of the specific working practices of the occupation for the purpose of increasing skills and acquiring technical knowledge; related subjects are those intended to enlarge vocational knowledge and understandings. Because business subjects, in many cases, meet these requirements, reimbursement may be made to teachers of book-keeping, arithmetic, typewriting, and other business subjects if they are related to the occupational needs of the students. Emphasis is placed upon coordination of instruction with job experience.

Principles of organizing business-education courses. A few general trends and principles in organizing and administering business-education courses are:

1. The aims and curricular offerings should be expanded in business education to include social and personal aims.
2. The high school should not have any curricula designed primarily for specific vocational training.
3. A social-studies background is essential in business education, as it is in any and all vocational education.
4. All business-education courses which are primarily vocational should be placed in the last two years of high school.
5. Typewriting and bookkeeping, because of their personal value, should be offered in the ninth and tenth grades as electives, so the abilities can be used during high school and skill maintained by practice.
6. The amount of credit in vocational subjects should be limited to about four units.

These proposals, although contrary to the philosophy and principles of many vocational-curriculum builders, are not entirely incongruous with their practices and certainly are not antagonistic to the trends. If one views the curriculum as a whole and sees the need of social, scientific, mathematical, linguistic, and physical instruction, together with training in aesthetic appreciation, emotional stability, ethical character, recreation, and worthy use of leisure, the curriculum is already full, and as mentioned before, all these are basic to any vocation.

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TRENDS IN ORGANIZING AND REORGANIZING SECONDARY-SCHOOL CURRICULA: COMPARATIVE

In preceding chapters the authors presented their views as to what should be included in the high-school curriculum in order that the school might meet the needs of adolescents in modern society. The selection of these activities was based upon the goals established by society for the secondary school to achieve, the purposes of secondary education, and the peculiar characteristics of adolescents. These activities were organized into a general curriculum of common experiences and elective activities of an academic and vocational nature.

After the content of the curriculum has been selected, the next problem is that of organizing the activities for presentation and the determination of techniques of presenting them so that learning may proceed. The three large curricular phases, selection, organization, and presentation of materials, cannot be treated independently, for each one is based upon and depends upon the other. When one is modified, the others must be also.

In order to determine the trends in organizing and reorganizing secondary-school curricula, it is necessary to compare present curricula with those of the past. It is difficult, even with a knowledge of the genetic development of our present curriculum, to determine what the future content and organization will be. Limiting the comparison to schools of the United States prevents the influx of new ideas from other countries and encourages provincialism. There are many desir-

able features of schools of other countries which the United States might borrow—ideas which would be unknown if their curricula were not studied. Also, before one can reorganize the curriculum, it is necessary for him to know how it was and is organized.

In the present chapter, a comparison will be made between typical high-school curricula of the present and those of the Latin grammar school, the academy, and schools of several other countries.

TYPICAL HIGH-SCHOOL CURRICULA OF THE PRESENT

It is almost impossible to typify the high-school curricula of the various high schools of the United States, for they are better characterized by variety than by uniformity. It is easier to generalize by describing the typical pupil with respect to courses pursued than the typical high school with respect to the courses offered. In the smaller high schools, there is usually a single curriculum composed mostly of subjects all pupils must pursue in order to acquire sufficient credits to graduate. The general pattern usually includes four years of English, three or four of the social studies, two or three of science, and two of mathematics and a foreign-language course. In larger schools, these subjects are also offered, but in addition they offer a large number of specialized courses such as botany, zoology, and electricity rather than general courses. Although the combined number of courses offered in all high schools of the United States is over 200, many of these are electives pursued by a small number of pupils.

Subjects taken by a typical pupil in the seventh and eighth grades are: ¹

- English
- Social studies
- Mathematics
- Health, safety, and physical education
- Science
- Music
- Art
- Home economics (girls)
- Industrial arts (boys)

¹ Offerings and Enrollments in High School Subjects, Biennial Survey of Education, 1948-50, U.S. Office of Education, 1951, Chap. V, pp. 26-28.

Subjects taken by a typical pupil in the last four years of high school are:

English

Social studies (usually American history, foreign history, and problems of government, social and economic)

Science

Commercial subjects

Mathematics

Home economics (girls)

Industrial arts (boys)

Health, safety, and physical education

Music

This typical pupil program does not indicate either the subjects which are required or the typical curriculum of high schools, but it does indicate that, regardless of what other subjects are offered, more pupils pursue these than others and more high schools offer these than others.

It is not infrequent that in the small high school pupils have few or even no opportunities to elect any subject, for all are required for graduation. In such cases, the typical pupil program represents the typical offerings.

TYPICAL HIGH-SCHOOL CURRICULA COMPARED WITH THOSE OF THE LATIN GRAMMAR SCHOOL AND THE ACADEMY

The typical pupil program of the high school differs markedly from that of its two predecessors, the Latin grammar school and the academy. In contrast with that of a Latin grammar school, the limited curriculum of a small high school is broad, related to present-day society, and built upon the needs of adolescent personalities.

Curriculum of the Latin grammar school. Although the Latin grammar school was often spoken of as a single-subject school, since Latin was the chief subject, such others as ethics, history, and literature were taught. Pupils were also expected to read the Bible, attend church, and report on the sermons. Writing was sometimes taught in the grammar schools, as were English, Greek, and Hebrew. The "Grammar" of Lily and the "Colloquies" of Corderius were common texts, although both of them had been written before 1550.

College-entrance requirements at that time consisted of a thorough knowledge of Latin. Harvard required that one read classical Latin at sight, speak true Latin in verse and prose, and decline verbs and nouns in Greek. The requirement to speak Latin at Harvard was dropped in 1734. In Yale, Princeton, King's College (later Columbia College), and William and Mary College, the requirements were similar in requiring a knowledge of Latin. Thus, Latin was essential as a secondary-school subject for meeting college-entrance requirements.

By 1750, new and more practical subjects were finding their way into the curriculum. Commercial subjects, such as records, business practices, accounting, English, composition, and mathematics, were introduced in spite of the fact that the school did not want new subjects. They were included by demand of the people.

The school declined chiefly because of its narrow curriculum and narrow aims. It served only one class of people, and in one respect only—to prepare boys for college. America was beginning to break away from the influence of Europe, and education for girls was being demanded along with a more practical curriculum. Some of the parents of the children claimed, "We are too busy fighting Indians to be reading Greek and Latin." Gradually English became the medium of expression in colleges, and Latin was not needed, although colleges clung to the requirement.

The decline of the school, which began in the eighteenth century and was about complete by 1800, was one of the effects of the growth of democratic ideals in America with respect to universal education. This ideal had been voiced in the Massachusetts Law of 1647, but the masses of people had not progressed so rapidly as their leaders. Few persons availed themselves of the opportunity to go to college after finishing the Latin grammar schools, and the course was thus criticized because they received no practical benefits from it. Those entering Harvard came largely from a few towns: Cambridge, Boston, Roxbury, and Charlestown. Many towns did not send a single student to college from 1644 to 1700. In some places, they trained boys for college when none was accessible.

The influence of the Latin grammar school on present-day curricula is seen in the strong position Latin has held. However, this influence is declining in favor of more practical subjects.

Decline of the Latin school. By the close of the sixteenth century, the humanistic revival had spent itself, and the new learning in secondary education was exhausted in formal and meaningless routine, devoted to the study of Latin grammar, Latin speech, and narrow reading in Latin.² The unrest came because of the extreme formalism and the fact that Latin did not advance learning. There was also a movement to ennable the vernacular, which had been despised by scholars. French was accepted as a language of scholars by the middle of the seventeenth century. The schools were criticized on the grounds that they were neglecting matters of the everyday world and were stressing memory and not judgment.

The Latin school was in line for further criticism because of the development of the scientific movement, which was gaining strength in the sixteenth century and had much vigor in the next century. By the seventeenth century, scientific apparatus and principles had developed until one could engage in experimentation rather than speculation. Although the universities and the church were reluctant to accept the movement, chairs in science were started in Oxford in 1619 and Cambridge in 1663. Scientific societies sprang up, and science along with more practical subjects was advocated for secondary schools instead of formal Latin.

It was not until the middle of the seventeenth century that new schools including science appeared. Academies started in England but were short-lived. The "humanistic revival" which had ushered in the Latin schools was being replaced by the scientific movement. Two new schools were started as a result of this movement: the *Realschule*, or the "economic-mathematical real school," in Germany (1747) and Franklin's academy in America (1751). These are the only two schools which lived from the scientific period. At the same time the Latin grammar school continued to exist in America because of the colleges, which required Latin for entrance.

The need and desire for the type of courses offered in the academy had been felt for some time. The Latin school never was in favor with a large group in the population, and there was pressure to have a school which would teach the practical subjects. By 1732 the Grammar School

² I. L. Kandel, "History of Secondary Education," pp. 128ff., Houghton Mifflin Company, Boston, 1930.

of the City of New York taught a great range of subjects, including Latin, writing, mathematics, geography, bookkeeping, and navigation. Franklin's academy was probably the first to bear the name, but it was not the first to have such a curriculum. Many private schools had long offered courses quite similar to those proposed by Franklin.³

The curriculum of Franklin's academy. An excellent example of a school which was established by an outstanding leader, but which was not supported because it was too far ahead of its time, is found in Franklin's academy, which was established at Philadelphia in 1751. He wished to place in the curriculum only modern subjects, but even the public-spirited men who lent their financial support were so imbued with the traditional curriculum of the Latin school that they thwarted his plans. They insisted on including learned languages, while Franklin wished to teach everything "useful and ornamental." The curriculum included writing, drawing, arithmetic and accounts, geometry, astronomy, English declamation, history, morality, religion, politics, ancient and modern languages, gardening, and agriculture.

To establish and support the school, subscriptions were obtained and the city made donations. The appeal was made on the grounds that children should be educated at home rather than abroad, that the academy would meet the needs of public officers, since foreigners who were ignorant of American laws and customs were coming to America in vast numbers, and that it would prepare teachers for rural schools. The proposals for the school were completed in 1749, and the academy opened in 1751 with three schools—Latin, English, and Mathematics, each under its own master. Since from the start conditions favored the Latin master, it was not long before there was little similarity to Franklin's original plan. English did not receive the important place intended for it and was ousted, being called "vulgar" by the Latinists. Although Franklin's academy failed in its original purpose, it was the forerunner of the academy movement. It later became the University of Pennsylvania.

The curriculum of the Phillips' academies. Samuel Phillips, a judge, state senator, and lieutenant governor of Massachusetts, became the chief patron of an academy in Andover, Mass., which opened in 1778, and John Phillips, his uncle, established another in Exeter, N.H., in

³ R. F. Seybolt, *Source Studies in American Colonial Education, The Private School, College of Education Bulletin 28*, University of Illinois, 1925, pp. 100-107.

1781. The aim of their academies was the "great aim and real business of living," and the principal object was to promote true piety and virtue. The curriculum was broader than college-entrance requirements, although it served that function. These schools represent the first real beginning of the academy movement.

From their beginning, the academies were established for girls, who had no place in the Latin grammar school. Before this time, they attended writing school two days a week, and those who received a secondary education usually had a private tutor or went abroad. Girls were not admitted to the universities.

The curriculum was broad, including almost all subjects which would meet the economic and social needs of the times, mainly because it was not bound by college-entrance requirements. Various occupational groups, such as surveyors, teachers, merchants, and tradesmen, received training in them. In order to attract students, instruction was offered in any subject for which there was a demand. There were about 75 subjects taught in the academies of the state of New York in 1837,⁴ including various branches of mathematics, science, English, social studies, surveying, philosophy, law, ancient and modern languages, theology, business subjects, music, navigation, embroidery, painting, and the principles of teaching. From 1787 to 1870, 149 new subjects appeared in the academies of New York.⁵

In contrast to the Latin grammar school, whose curriculum paralleled that of the elementary school, the academy built upon the curriculum of the elementary school. It received pupils from the elementary school and gave them a secondary education which fitted them for participation in the affairs of daily life or for entrance into college.

The course was either three or four years in length. The classical curriculum was usually four years in length, while the English curriculum was three.⁶

There were some student activities in the academies which enriched the curriculum to some extent. Literary societies, debates, and plays were stressed, and in order to encourage support, the public was often

⁴ Paul Monroe, "Principles of Secondary Education," p. 58, The Macmillan Company, New York, 1916.

⁵ E. P. Cubberley, "Public Education in the United States," p. 187, Houghton Mifflin Company, Boston, 1919.

⁶ Kandel, *op. cit.*, p. 399.

presented with lectures, festivals, school exhibits, literary programs, and plays. In those academies operated by churches, religious societies were quite common, and all students received instruction in the Bible.

The curriculum and aims of the academies presented such a marked departure from those of the Latin grammar school that they account in part for their greater popularity, which attested to the fact that a classical-college-preparatory curriculum had made very little appeal to the masses of people. The colleges were rapidly expanding their entrance requirements from Latin and Greek to the addition of geography (1807), algebra (1820), geometry (1844), and ancient history (1847).⁷ Much of the popularity of the academies arose from the fact that they made an effort to serve all classes of people and offer any course for which there was a demand. The academy movement reached its height about 1850 to 1860, when there were about six thousand schools.

Curriculum of the first high schools. The curriculum of the first high school, established in Boston in 1821, was based on an analysis of what might fit one for active life and work, whether mercantile or mechanical. It was built upon and was an extension of the elementary school and required that pupils, to be admitted, must be well acquainted with reading, writing, English grammar, and arithmetic "as far as simple proportion."

The school was for boys exclusively, and the term was three years. The curriculum included composition, declamation, logic, literature, algebra, geometry, mensuration, plane geometry, navigation, geography, surveying, natural, moral, and political philosophy, and ancient, modern, and United States history.

Although the high school selected the best features of the Latin grammar school and the academy, before 1910 the curriculum had become formalized, with emphasis upon literary and academic subjects and with college preparation the chief end in view. The offerings of a typical high school as revealed by the percentage of pupils pursuing various courses followed the pattern shown in Table 16; Latin, algebra, rhetoric, and history were pursued by more pupils than was any other subject. Greek, French, trigonometry, astronomy, chemistry, geology, and psychology were offered by 1895, but they were not very popular. These subjects, with the exception of four sciences,

⁷ *Ibid.*

Table 16. *Popularity of Subjects in High Schools for the Period 1890 **

Subject	Percentage of Pupils
Latin.....	43.97
German.....	11.40
Algebra.....	54.27
Geometry.....	25.34
Physics.....	22.77
Physical geography.....	23.89
Physiology.....	29.95
Rhetoric.....	32.05
History.....	34.33

* Report of the United States Commissioner of Education, 1916, Vol. II, p. 487.

namely, botany, zoology, meteorology, and physiography, included all the subjects recommended by the Committee of Ten for inclusion in the four fundamental curricula at that time.

By 1898, English literature and civics had appeared, and, by 1910, Spanish, zoology, botany, agriculture, and domestic economy were reported as offered. General biology, industrial and manual training, drawing, bookkeeping, and vocal music were added to the list in 1915.⁸

In 1922, the offerings in high schools reported to the U.S. Office of Education had more than doubled the list reported for 1915, the chief additions being in the fields of social studies, commercial subjects, and industrial arts. In 1928, 156 subjects were reported to the U.S. Office of Education. By 1934, there were 206 subjects; and in 1949, when the most recent survey was made, 274 subjects were being offered in high schools of the United States.⁹

One cannot conclude from the increased number of subjects offered that the curriculum increased proportionately, for many of the subjects reported in 1900 as single subjects, such as history, were subdivided later into many specific courses. There is revealed, however, a great expansion in offerings.

⁸ Carl A. Jessen, *Offerings and Registrations in High School Subjects, U.S. Office of Education Bulletin 6*, 1938, p. 1.

⁹ Biennial Survey of Education, *op. cit.*, p. 109.

THE CURRICULA OF SECONDARY SCHOOLS OF OTHER COUNTRIES COMPARED WITH THAT OF THE HIGH SCHOOL

A single type of school system in the United States is not so desirable perhaps as a variety of types, for that which is best suited to one part of the country would not necessarily meet the needs in another part. Progress is made through experimentation and variation. New ideas and practices can be introduced in the school system, and, by means of a careful evaluation of the outcomes and by comparison and contrast with other systems, good and bad elements can be detected and rejected, retained, or modified. These comparisons should not be limited to the schools of our own country, but should extend to those of others.

The purpose of comparative education is not to judge school systems of other countries, nor should comparisons be made on a good-better-best basis. Similarities and differences should be noted and the systems analyzed and examined, but not necessarily evaluated. We lack universal standards for attempting the latter, and if judgments are made, one is inclined to use the school of his own country as his criterion.

The secondary schools of various countries serve different purposes, but even if two nations have accepted the same educational goals, a pattern of curricular activities which would achieve them in one country would not necessarily be efficacious in another. Such factors as the character of the people, the geographical location of the country, the topography, the climate, the traditions, culture, religion, social standards, wealth, and occupation of the people, together with political and economic relations with other nations, are influential not only in determining the direction of the educational goals and philosophy of the nation but also in determining the type of curriculum most efficient in achieving them. There is a reciprocal relationship between schools and the political and social order of a country. Society will determine the type of schools; at the same time, the schools may be instrumental in creating, changing, or perpetuating the social order.

Secondary-school curricula of Russia. The curriculum of the typical secondary school of Russia resembles that of the United States.

The curriculum of the secondary schools of the cities is based on that approved by the people's Commissariats of Education of the Re-

publics. A standard curriculum places emphasis upon native language and literature, mathematics, and manual labor. In addition, foreign languages, history, geography, physics, biology, chemistry, music, drawing, physical culture, and military drill are included.¹⁰

The curriculum in 1938 included 20 required subjects, or "disciplines." As contrasted with the old Russian *Gymnasium*, the curriculum omitted completely the study of Latin, Greek philosophy, and religious catechism and stressed science and mathematics. There were no electives being offered and no differentiated courses for special groups.¹¹ Reforms made during the period 1943 to 1945 liberalized the requirements by making more provision for special interests through extracurricular and extramural activities as well as through the introduction of voluntary classes. The election of courses depends upon the wishes of pupils, and they may be in literature, history, mathematics, geography, music, drawing, manual training, and physical culture.¹²

The public-school system is alike in all parts of Russia. At the age of seven, a child enters the elementary school, which is free, universal, and compulsory for four years in rural and seven in urban communities. The first four years of the 7-year school are identical with the work in the rural school. After the 7-year school, the pupil may enter the eighth class in one of the complete, or 10-year, secondary schools or the secondary vocational school. The latter gives a three-year course in agriculture and industry and a normal-school or medical-school course for surgeons' assistants. The 7-year school, together with the 3-year secondary school, is called the complete, or 10-year secondary school. A diagram of the system is shown in Fig. 19.

Russia still retains examinations at the end of the 4-, 7-, and 10-year school. Any who pass these examinations may enter the next higher institution, regardless of social origin or parents. Before 1940, all elementary and secondary schools were free. In 1940, fees were introduced for all save needy students with ability. Free tuition was abol-

¹⁰ A. Pinkevich, "Science and Education in the U.S.S.R.," p. 39, G. P. Putnam's Sons, New York, 1935.

¹¹ Alexander Efron, *Current Trends in Soviet Secondary Education*, *Educational Forum*, 3 (March, 1939), pp. 291-292.

¹² Eugene Medynsky, *Education in the Soviet Union*, *Educational Forum*, 9 (March, 1945), pp. 285-288.

ished because it was believed to be no longer necessary and because the war effort was too costly.¹⁸

With the exception of those receiving gold and silver medals on graduation from secondary schools, applicants to the universities must

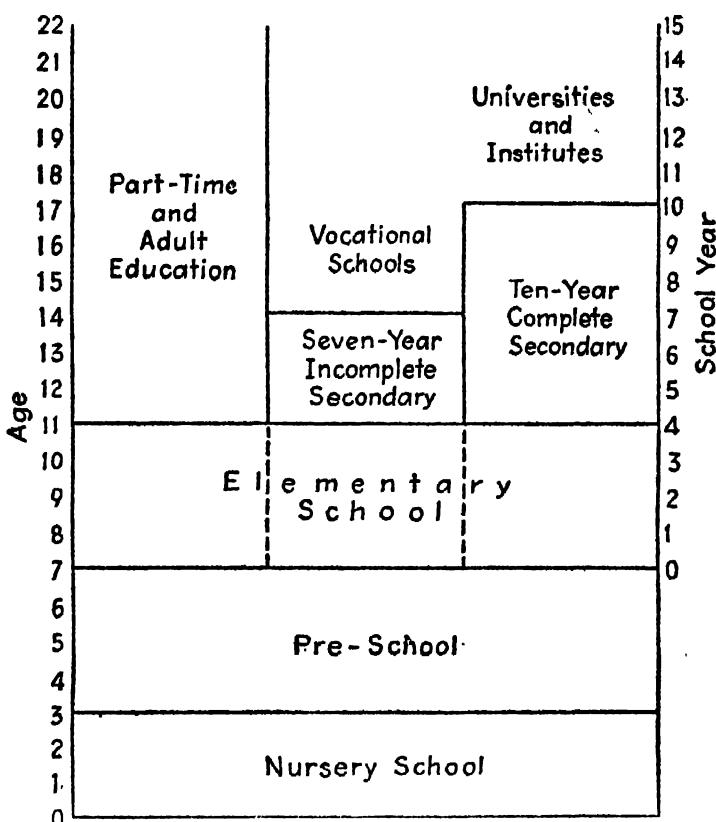


FIG. 19. The Russian school system. (Drawn from data presented by Martena T. Sasnett, "Educational Systems of the World," p. 693, University of Southern California Press, Los Angeles, 1952.)

take entrance examinations. The universities are essentially vocational schools, and each has a specific definite function. They are not like the liberal-arts colleges in the United States. The main types are the institute, the university, and the industrial or engineering academy, the institutes being the most common. The universities train specialists in philosophy and the social and natural sciences and teachers for these subjects. The others train engineers.

¹⁸ George S. Counts, Recent Changes in Soviet Education, *Educational Forum*, 10 (May, 1946), pp. 423-436.

Secondary education in France. The traditional type of secondary education in France is strongly classical. For years, educational leaders believed in organizing a secondary-school curriculum based on the disciplinary values of subjects rather than on utilitarian values. Their views were summarized in the following statement: "Classical culture is the basis of our literature, of our arts, of our history, and of all of our national traditions. It has been the leaven of the genius of France. It is the school of thought that liberates and defines."¹⁴ The modernists opposed these views and have constantly attempted to introduce modern subjects into the curriculum. Until recently, regardless of all attempts at various times to change the French ideal of liberal education, France has still clung to it. Even in recent reforms, the term *culture générale* is retained, but the method of attaining it has been changed.

Reforms of 1937. The law of 1937 which further modernized education in France was passed because of the effort of Jean Zay, Minister of Education. The provisions of this law were as follows: private preparatory schools of all types were abolished, making a common elementary school of seven years the same for all. The school system was divided into two divisions called the "first level" and the "secondary level."

The first level was divided into three parts: (1) the elementary school, (2) the raised elementary school, and (3) the continuation school. At the end of the fifth year, candidates for the secondary school and those desiring to continue in the raised school took the examination for the *certificat d'études primaires élémentaires*. The raised elementary school was similar to the vocational school of the United States. It consisted of a three-year curriculum of broad academic subjects and offered courses in various vocational fields. The continuation school was obligatory for all students who did not enroll in either the raised primary school or the secondary schools.¹⁵

There are two main secondary schools of France, the *lycée* and the *collège*. The *lycées* are maintained by the central government, the latter by the local municipal authorities. The two are alike in cur-

¹⁴ Kandel, *op. cit.*, p. 205.

¹⁵ H. Nabholz, Reform of the Secondary Schools of Germany and France, *School and Society*, 47 (Jan. 8, 1938), p. 56.

ricula, methods, and teachers, although the *lycées* are fewer in number.

French educators, during the occupation by the Nazis, made plans for educational reforms when they should be liberated. They recognized the following defects of the existing system:

1. Lack of articulation between the different levels. They had been considered discrete divisions serving independent purposes.
2. Lack of equality of opportunity. Even with the abolition of fees, parents of the laboring classes felt that secondary education was not for their children.
3. Overemphasis on examinations to the detriment of true learning. This situation led to a rigid course of study and the practice of cramming, which created no genuine interests and left too short a time for the development of character.
4. Lack of flexibility in the curriculum.¹⁶
5. Failure of the curriculum to be in harmony with the social structure or to be in keeping with the economic and social evaluation.

The New Plan. In the light of these criticisms, a new plan of education was devised with the following features:

1. Equality of opportunity for all and the natural right of each individual to attain his fullest development.
2. The creation of a common school system with a continuous line through three levels, without any social distinctions and with provision for general and vocational education according to interest and ability.
3. Selection to be based on ability rather than on any social factor, by making provision for poor but capable students to meet financial needs in attending both the secondary schools and the universities.
4. Transfer from one division to another based on previous school record rather than on examinations.
5. Flexibility of curriculum rather than rigidity.
6. A two-track system: subjects common to all ("common trunk") and optional subjects.

The plan includes a common primary school up to the age of 11. At this age, all enter the first cycle of the secondary school, which is free and compulsory up to the age of 15. This is the exploratory and orientation stage. Students may then enter the second cycle of the

¹⁶ I. L. Kandel, Proposals for the Reform of Education in France, *Educational Forum*, 10 (March, 1946), pp. 303-310.

secondary school and remain to the age of 18. This cycle leads to the university. Those who do not pursue the second cycle must pursue part-time education up to the age of 18 (see Fig. 20).

The orientation period includes French, mathematics, history, and one foreign language. The upper division permits students to elect three types of subjects: classical, modern, and technical. The classical

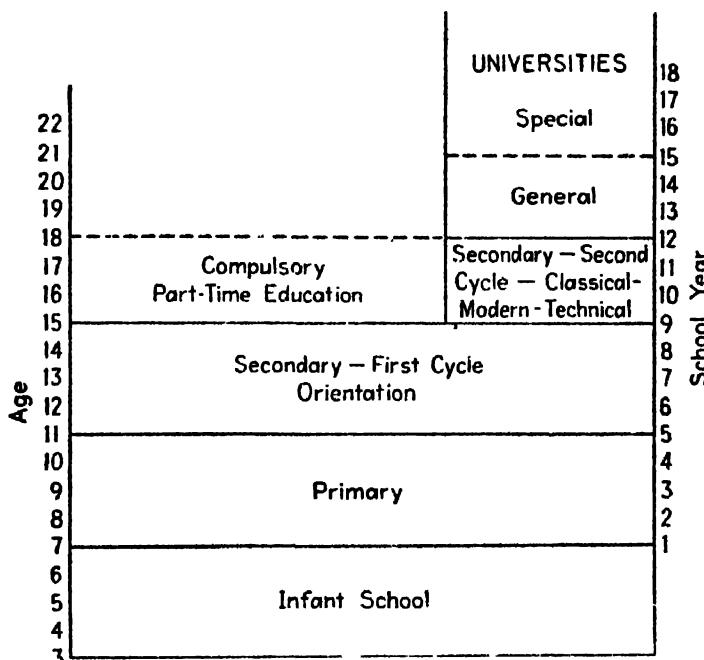


FIG. 20. Secondary education in France. [Drawn from data presented by Georges Emile Roger, *Educational Reforms in France since the War*, *Educational Forum*, 14 (May, 1950), pp. 433-442, and Martena T. Sasnett, "Educational Systems of the World," p. 262, University of Southern California Press, Los Angeles, 1952.]

stresses Latin; the modern, mathematics and science; and the technical, vocational subjects. The divisions are flexible, and transfer from one to the other has been made easy.¹⁷

Secondary schools of Germany. The secondary schools of Germany furnished an example of a parallel system; that is, various schools were established on the same educational level which consisted of comparable courses but were designed for special classes or groups. The three traditional types were the *Gymnasium*, *Realgymnasium*, and

¹⁷ A. M. Desaint Blanquat, *Educational Reform in France*, *Educational Forum*, 12 (November, 1947), pp. 75-84; and Georges Emile Roger, *Educational Reforms in France since the War*, *Educational Forum*, 14 (May, 1950), pp. 433-442.

Oberrealschule, which were nine-year schools built upon a common elementary school of four years (the *Grundschule*). Each of these schools had six-year counterparts: the *Progymnasium*, *Realprogymnasium*, and *Realschule*.

During the Republic, two new types of schools were added, the *Deutsche Oberschule* and the *Aufbauschule*, and various combinations of these which had sprung up experimentally before and after the First World War.¹⁸ There were 80 types of schools before the reforms of 1936-38.¹⁹ These various types of schools were developed to meet the needs and educational desires of social groups or organizations. Pupils who entered them pursued the course offered, as contrasted with the French and American systems of entering a school and selecting a course. These schools were entered at the ages of nine or ten after a three- or four-year elementary-school training, and once a school was selected, transfer to another was difficult and not frequently practiced.

The oldest school, and the one with the greatest prestige, was the *Gymnasium*, a school stressing Latin and Greek, through which medium the culture of modern civilization was studied historically. In the *Realgymnasium*, more emphasis was placed on modern languages, mathematics, and science, French and English being the chief modern languages. Neither Greek nor Latin was taught in the *Oberrealschule*, which required modern languages and stressed mathematics and sciences.

Of the two new types of schools developed by the Republic, the *Aufbauschule* and the *Deutsche Oberschule*, the former, a six-year school, was established in small towns to afford an opportunity for gifted children to attain a secondary education under home influence. The curriculum was similar to that of the *Oberrealschule* or the *Deutsche Oberschule*. It more closely resembled the comprehensive high school in the United States than any of the German schools and spread even to cities.

The *Deutsche Oberschule*, nine years in length, was a further attempt to popularize secondary education. The emphasis was on Ger-

¹⁸ I. L. Kandel, Secondary Education, *Educational Forum*, 3 (May, 1939), p. 478.

¹⁹ Theodor Wilhelm, Scholars or Soldiers? *International Educational Review*, 7 (1939), pp. 81-102.

man history and literature, and it recognized the arts, philosophy, economics, law, and religion, which was a part of the curriculum of all secondary schools.

After finishing the four-year *Grundschule*, or the common elementary school, those not entering one of the secondary schools attended the *Mittelschule*. This school was six years in length and charged tuition. Although separate schools were established for boys and girls, some coeducational schools were established. They offered no foreign language, but a general curriculum and vocational training. The school was not popular, partly because there were numerous trade schools in which pupils could be trained, and because it did not give the graduates privileges granted by the secondary schools. As its name implies, it was a school midway between the *Grundschule* and the secondary school, designed for those wishing a practical education preparing for commerce, agriculture, or intermediate positions in administrative and industrial enterprises.²⁰

The Reforms of 1936 and 1938. The reforms of 1936 and 1938 made two radical changes in the school system: the number of types was reduced to two, and the school period was shortened one year. This was done because the German four-year plan called for army officers and new men in the professions. This meant that the nine-year secondary schools became eight-year schools. Since girls were not so affected, their schools carried on as before.²¹ The new system called for four years of elementary education in the *Grundschule* and an eight-year secondary system.

Since the Second World War, Germany has had several types of school systems because of the four zones into which she has been divided and occupied: British, Russian, French, American. Educational changes in the American zone will be described.

Recommendations of the U.S. Educational Mission. At the close of the Second World War, most German schools were closed, many school buildings were in ruins, and teaching staffs were gone. One of the first tasks of the Military Government was to open schools. By

²⁰ Stephen P. Cabot, Secondary Education in Germany, France, England, and Denmark, *Harvard Bulletins in Education* 15, Harvard University Press, Cambridge, Mass., 1930, p. 7.

²¹ Hans Nabholz, The Reintroduction of the Twelve-year Secondary School Period in Germany, *School and Society*, 46 (April, 1937), pp. 549-550.

the fall of 1945, most elementary, a large number of secondary, and some vocational schools had opened. Emergencies to be met were finding and training teachers, repairing buildings, and securing materials.

In 1946, an appraisal of the school situation was made by a group known as the U.S. Educational Mission to Germany. After studying the school system, the following recommendations were made:²²

1. All children should stay together in the elementary schools for six years and not be divided by sex, social class, or vocational intentions.
2. The secondary schools should be organized into a unified system.
3. All should be tuition free.
4. Differentiation should be provided by a system of core subjects and electives rather than in separate schools.
5. The curriculum should be made more practical and have less academic traditions which are remote from life.
6. School life should provide for democratic living.
7. Vocational education should be revised so that pupils will pursue social studies and cultural subjects as well as vocational subjects.
8. Since German youth must make vocational choices at the age of fourteen, guidance should be stressed and the techniques of guiding and counseling improved. Aptitude tests should accompany judgments of teachers and parents in counseling with students concerning vocational choices. In the past, objective measures for either instruction or guidance have been absent from German schools, and group-standardized tests have been used very little.

Educational changes are being made in Germany which are in keeping with these general principles. Reforms are being made not so much on a national as on a local level. Many cities and states are changing their school systems, but the progress made in Bremen seems to be the most outstanding.

The new system in Bremen is like that of the United States.²³ It is a 6-6 plan, that is, six years of elementary, *Grundschule*, and six

²² David Segel, Evaluation and Guidance in German Schools, *School Life*, 30 (October, 1947), pp. 15-18; Bess Goodykoontz, U.S. Educational Mission Report, *School Life*, 30 (October, 1947), pp. 10-12. Other articles concerning the report are published in the same issue. See also Bess Goodykoontz, Teachers and Children in German Schools, *School Life*, 29 (July, 1947), pp. 3-6.

²³ Fred H. Tone and Hans Waringhoff, The Bremen School Reform, *Educational Forum*, 14 (March, 1950), pp. 331-337.

years of secondary, *Oberschule*. The city has eliminated tuition fees and made secondary education open to all; and all schools lead to the universities. All pupils are required to attend school for nine years plus three years of part-time schooling.

The secondary school is divided into four branches as a method of making provision for various types of pupils. One branch has three years of school plus three years of part-time vocational schooling, which is elected by 90 per cent of all youth. The next branch is similar save for four years of schooling, and two other branches call for six years of secondary education either of a vocational or of an academic nature. The curriculum of each branch is modern, and each places greater stress on education for community life than did previous curricula of German schools.

Secondary schools in England. As contrasted with the schools of France and Germany, which have strong central control, the schools of England encourage local initiative.

The national government of England took little or no interest in a state system of education before the twentieth century. Before that time, the education of youth was left to the Church, local initiative, or private undertakings. The philosophy of the Englishman was that the education of his children was a matter of personal and private concern, and not a function of the state, and in this matter he did not wish to be disturbed. Education was considered a class privilege, and the state was indifferent in the matter.

Before 1900, secondary schools were maintained almost wholly at private expense, and each had its own preparatory department. Many of the private schools, known as "public" schools, are several centuries old, one of them having been founded as early as 1382. They are known as "public" schools because they were privately endowed for the good of the public. They are private in our meaning of the term since they charge tuition and are privately controlled. They are still mostly for the upper classes, since the tuition is high and few can afford to pay it.

For the laboring and lower classes, free elementary schools which led to a higher education were maintained. They were supported by the churches and by societies for the promotion of Christian knowledge. After 1870, they were given some aid by the government. Although the two systems were similar in curricula and equipment,

they were widely separated by social differences and distinctions. The two systems were developed mostly in cities, few schools being established elsewhere.²⁴

The Fisher Act of 1918 extended educational opportunities and increased the government's part in the system. It provided for free places in secondary schools for those who had ability but lacked funds, extended compulsory education to the age of fourteen, and provided for secondary courses in academic and vocational subjects.

The Great Public Schools. The best-known schools of England are the great public schools, some of which were established during the fourteenth and fifteenth centuries and are the oldest and most time-honored of all secondary schools. Although there are now about fifty, nine are much older and better-known than the others. The better-known of these are Eton, Winchester, Westminster, Shrewsbury, Harrow, Rugby, Merchant Taylors', Charterhouse, and St. Paul's. They are rich in customs and traditions, maintain a high degree of scholarship, and enjoy a high degree of prestige which has remained unchanged for many years. They are exclusive, and since each enrolls 450 to 700 pupils, places in them are often difficult to obtain. Tuition fees are high, Eton and Winchester charging the highest of all. The fees usually include maintenance and lodging since all of them are boarding schools divided into houses over which there is a headmaster. Teachers and headmasters are well paid and are selected from the best scholars from the universities.

The curricula are classical, Latin and foreign languages holding a prominent position. Two languages other than English are required of all pupils. Other subjects are mathematics, science, religion, and philosophy. Examinations are the basis of all promotions, which are made every half year. At the age of sixteen, college-entrance examinations are taken although the students remain in the public schools for two or three additional years specializing before going on to the university. The buildings are old, but the equipment is modern, consisting of science laboratories, modern dormitories, gymnasiums, and workshops.²⁵

²⁴ I. L. Kandel, "History of Secondary Education," pp. 282ff., Houghton Mifflin Company, Boston, 1930.

²⁵ Cabot, *op. cit.*, pp. 61-66.

These schools still cling to many old customs and traditions in the way of living, dress, and school government and still spend much time in playing games and entering into sports. Through the games and sports, true sportsmanship, cooperation, character, honesty, and unselfishness are developed. It has been said that many of England's battles have been fought and won on the playgrounds of these schools, for the majority of the boys enter professions or become statesmen. In fact they are about the only open roads to positions in the army, navy, Parliament, or public life. They are considered the training ground of leaders and statesmen.

Although scholarship is stressed, it is not emphasized so much as in the French and German schools. "Good form" is the keynote in the public schools. Thus it is better form to take classics than science, and since character training is one of the chief aims, all things developing character are considered good form. It is good form to do certain disagreeable tasks or take certain subjects.

The public schools have greatly influenced the other secondary schools in their traditional adherence to classical curricula, although most of the progressive and modern subjects are found in the municipal and county schools. They still maintain their prestige, although it is slightly lessened owing to the fact that entrance to these schools is gained mostly by paying fees, while, in the publicly supported schools, one-fourth to one-half the pupils are selected on the basis of ability; as a result, the public schools are no longer considered to have a monopoly of all the superior ability of the nation.

The schools established by the county and borough councils are known as council schools. Their chief function is to prepare boys for the universities, but only a few of the graduates enter the universities. This domination of the curriculum by the universities is due to the examinations set by them. It is criticized in that it sets a curriculum of the same type for all who attend.

Reorganization in England since the Second World War. The educational reforms introduced through the Education Act of 1944 and placed in operation in April, 1945, were a part of a thorough social reform in all aspects of life brought to a climax by the war. The changes made in Northern Ireland, Scotland, England, and Wales showed the same general aim: the fullest possible democratization. In

England this meant (1) bringing education within the reach of all; (2) providing for the individual by offering a great variety of subjects to suit various ages, aptitudes, and abilities; and (3) integrating the divisions so as to unify primary, secondary, and further education.

Local authorities were given initiative, but all came under the Minister of Education, who replaced the President of the Board of Education. Counties and county boroughs are the only authority for

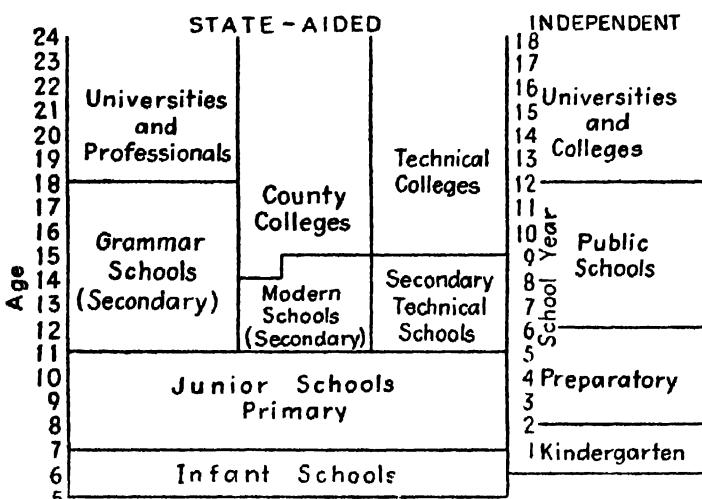


FIG. 21. The English educational system. (Drawn from data presented by Martena T. Sasnett, "Educational Systems of the World," p. 225, University of Southern California Press, Los Angeles, 1952.)

education and are responsible for all forms. Even the private schools come under state supervision, and the Minister may close one if it should drop below required standards. The great public schools are under contract with the government.

The new act changed the structure, dividing the system into three stages: (1) primary up to the age of 12, which is compulsory for all, (2) secondary from the ages of 12 to 19, and (3) further education. The secondary division was made compulsory to the age of 15, and part-time education was required to the age of 18 for those who did not continue to the universities (see Fig. 21). It was planned to raise the compulsory age to 16, but in 1951 it did not appear this would become a reality.²⁶ Secondary schools of all types, grammar, modern,

²⁶ C. H. Dobinson, The Present Status of the English Modern Schools, *Educational Forum*, 15 (March, 1951), pp. 261-270.

and technical, are to be on a parity, which will be difficult to achieve because of the strong English tradition.²⁷

Nondenominational religious instruction is to be compulsory in all schools, save in the Church schools, where it may be denominational. Medical attention is given free, as well as lunches and daily milk and care and education for afflicted children.

The act provides also for a new school, the "county college," which will provide general rather than technical education. Attendance in this school is required at least one day a week of all who do not continue in the secondary schools. As yet its scope and purpose are not definite. The public schools are to be retained, notwithstanding their high fees which range from \$700 to \$1,200 a year, and they may pursue a kind of separate system of education, for it is claimed that this type is still needed for some boys because it suits their abilities and aptitudes.²⁸

Modern Schools. According to Dobinson of the University of Reading, England, the modern schools are the most interesting in English education.²⁹ They enroll pupils from the ages of 11 to 15, though some are extended beyond this age. The first few years are devoted to general education: English, history, geography, mathematics, science, religious instruction, and some foreign languages. They give remedial work in the three R's and instruction in handicrafts, cookery, and needlecraft. In all schools, music and art are taken.

The last two years more choices are permitted, and the program is less general. Such courses are offered as agriculture, commerce, distributive trades, motor engineering, printing, home nursing, and domestic science. Of the 3,000 modern schools in existence, only 1,383 are coeducational, and, in these, separate classes are maintained for boys and girls.

These schools enroll about 70 per cent of all English children attending publicly maintained secondary schools, and about 90 per cent

²⁷ Sir Frederick Clark, Recent Reforms in English Tradition, *Educational Forum*, 11 (March, 1947), pp. 289-294; and H. C. Dent, Reconstruction in Great Britain, *Educational Forum*, 9 (May, 1945), pp. 395-399.

²⁸ J. F. Wolfenden, Public Schools and State Education in Britain, *Educational Forum*, 12 (November, 1947), pp. 31-34.

²⁹ Dobinson, *loc. cit.*

of all youth who attend secondary schools are enrolled in publicly supported ones.⁸⁰

Secondary education in Italy. In 1939, reforms in the Italian school system were designed to bring together more closely the school system administered by the Ministry of National Education and the physical, military, and political training given by the organizations directly connected with parts of the National Fascist party. Attending school constituted a part of the regular service to the state of all youth of Italy. Attendance was obligatory between the ages of 4 and 21. Beginning at the age of 4, all youth attended school to the age of 14. If the youth no longer attended a formal school, he took part in the activities of the Italian Youth of the *Littorio* until he was 21.

The school system was divided into six orders: elementary, middle, higher, university, artistic schools, and schools for women. The elementary order consisted of the maternal school from the ages of 4 to 6, which was compulsory; the elementary school of three years from ages 6 to 9; the school of labor of two years from the ages of 9 to 11; and the artisan school, a three-year division, from the ages of 11 to 14.

The middle school (*scuola media*) had a three-year curriculum for those preparing for different types of schools in the higher order. The vocational schools paralleled this division and led to technical schools.

The higher order (secondary education) included four five-year schools: classical lyceum, scientific lyceum, teachers' institute, and commercial technical institute; and four four-year schools: the agriculture institute, industrial institute, institute for geometricians, and nautical institute. There were also, on this level, schools for women: a three-year institute followed by a two-year school to train teachers for the *instituto femminile*.

Entrance from the higher order (secondary schools) to the universities was on the basis of examinations, save in the colleges of law, political science, and letters and philosophy. Entrance into the faculty of education could be made only from the teachers' institute and then by examination. This required, in some cases, an early selection of a vocation. Those divisions of the secondary school having only four-

⁸⁰ H. C. Dent, What English Modern Schools Are Doing, *Educational Forum*, 17 (March, 1953), pp. 261-268.

year courses could prepare students only for similar types of work on the university level, and they were admitted then on the basis of an examination.⁸¹

Reorganization in Italy since the Second World War. The major postwar problems of Italy were those pertaining to:⁸²

1. An impoverished nation. Educational problems could not be solved until the material necessities of life were provided.
2. Obsolete textbooks. All old texts were full of Fascist ideas which required that they must be rewritten, cutting out all traces of Fascist indoctrination. This involved also the task of printing and distributing them.
3. Lack of trained teachers. In the past, most of the teachers had only a smattering of liberal education and even less of practical and professional. The need is for teachers with more liberal education and more training in the humanities.

The school system is being reorganized in the following manner:⁸³

The elementary system extends from ages 6 to 14; the secondary system, from ages 11 to 18. Pupils may enter secondary schools at the ages of 11 or 14. The secondary division consists of eight types: the middle school or connecting link between the elementary and the lower-grade secondary school, the classical gymnasium lyceum, scientific lyceum, the normal institute, and three types of technical institutes. Pupils select the school which helps prepare them for a chosen career. There are 1,200 secondary schools which are under the control of the government and which are tuition free.

The middle-school curriculum, which is the only school most of the pupils attend, leads to the lyceums and institutes. It stresses religion, Italian, Latin, one foreign language, history, geography, mathematics, drawing, and physical education. It is similar to a junior high school in the United States in many respects.

The Folk School of Denmark. The most outstanding school of Denmark is the Folk School (or Danish Folk High School), which is a

⁸¹ I. L. Kandel, Education in Italy, *Educational Forum*, 4 (January, 1940), pp. 206-213.

⁸² Lawrence H. Battistini, Italy's Educational Crisis, *Educational Forum*, 10 (March, 1946), pp. 317-325.

⁸³ Howard R. Marraro, Post War Education in Italy, *Educational Forum*, 15 (May, 1951), pp. 471-478.

part of the system for the folk, or common people, as contrasted with a distinct system paralleling it for those planning to attend college.

The Folk School is an excellent example of a curriculum for young people built not on books and subjects but upon the very processes of the lives of youth. It is a school for rural youth and adults between the ages of 18 and 30, although the average age of students is 20 to 21 years. Its aims are to make Danish culture a powerful element in the minds of the young and to dignify and vitalize rural life. It is usually small and located in rural areas. Since a practical and vocational education has been received just previously, the curriculum contains both cultural and practical subjects. It aims to promote the welfare of society and give knowledge of and create a devotion to Denmark. The philosophy of the Folk School is based on that of Nikolaj Grundtvig, who felt that "not until the elementary school period and the restless years of adolescence had been passed, not until after the life questions had been asked and the young people had experienced something of the realities and hardships of existence through work, would they be receptive to those higher ideals which were the very basis of his whole plan."³⁴ This feature of postponing secondary education until after the period of adolescence is the most unique feature of the Danish schools. Although the high schools have always adhered to Grundtvig's ideas and have never become technical schools, agricultural and technical schools, embodying his principles, have grown up all over Denmark.

The Danish Folk School is unique in other respects. As contrasted with those whose curricula are designed to prepare youth for college or prepare them for service to the state, the Folk School exists to awaken personalities and develop responsibility. Few lessons are taught from textbooks, which determine the course of study in most schools. In lieu of this, an instructor lectures an hour or so each day and the rest of the time is spent in social-civic activities and in receiving answers to questions which are considered more important than a previously determined body of subject matter. No marks are given, examinations are not employed, and no one is graduated. The belief is that the community is the true educational institution. The schools

³⁴ Cabot, *op. cit.*, p. 87. Reprinted by permission of the President and Fellows of Harvard College.

help young people become intelligent, independent individuals, who accept their full share of the constructive tasks of civilization.³⁵

Before attending the Folk School, the majority of children of the common classes attend an elementary school (*Folkeskole*) for eight years beginning at the age of 6. From the ages of 14 to 18, pupils do not attend a full-time day school, but a continuation school. During this period, much of their time is spent on farms learning agriculture or skilled trades through practical experience. After attaining the age of 18, they may enter the Folk School. It is open to boys in the winter and girls in the summer. There are not many of these schools in Denmark, but they have been increasing in number since the first one was established in 1844. They are subsidized by the government and charge fees, but these may be reduced for worthy students according to financial circumstances.³⁶

The schools for the other classes begin at the age of 6 in preparatory classes of five years leading to the middle school with a four-year course. At the age of 15, a pupil may either complete the middle school (*Mellomskole*) by taking an extra year in the *Real Klasse*, or he may enter a *Gymnasium* for three years. The *Gymnasium* offers three courses, the classical, the mathematics-science, and the modern languages. The student is then eligible to enter a university.

Mexico. Public secondary education was unknown in Mexico prior to 1910, and growth has been slow since then. In 1926, there were only four free, public secondary schools, enrolling 3,860 students. In 1951, the number had increased to 454 schools, with 61,629 students. New schools are being established to meet the needs of increasing numbers who desire secondary education.

Secondary education is built upon a six-year elementary school. Students who continue their education enroll in a three-year secondary school. This division was formerly a college-preparatory school, but since the majority of graduates did not continue formal schooling, the program of the three-year school was changed and a two-year school added to prepare youth for college.

³⁵ J. K. Hart, "Light from the North," pp. 11ff., Henry Holt and Company, Inc., New York, 1927.

³⁶ Uffe Gosen, "The Danish Folk High School," pp. 1-10, Association of High Schools and Agriculture Schools of Denmark.

All education in Mexico, with the exception of the universities, comes under the direction of the Ministry of Education, which constructs curricula and establishes requirements for promotions and graduations. Courses of study prepared by the Ministry are used as guides. Considerable freedom is permitted in presenting subject matter and units of instruction. The work of each year, divided into units, may be developed in any manner the teacher desires in relationship to the locality, provided the content is covered and the stated objectives met.

In the last two years, or the preparatory division, the curriculum is more rigid. All students are required to take certain basic courses in either of two areas of specialization, science or the humanities. After electing one of these areas, the student has little choice in electing courses.⁸⁷

Secondary-school trends in Canada. Canada has many educational problems similar to those in the United States. She has many small administrative units, three-fourths of which employ only one teacher. With many of the districts in sparsely settled areas with a low assessed valuation, Canada is attempting to make secondary schooling available to all by consolidation and by other methods. Also as does the United States, she has a shortage of teachers and has increased salaries to help improve the situation.

Some of the trends in curriculum revision as shown by the plans of Canadian educators are:⁸⁸

1. To place more emphasis on morality, physical well-being, citizenship, and attitudes toward work.
2. To break from the traditional academic courses and offer more vocational ones without separating the two. For girls, household arts, music, and literature are being stressed; and for boys, industrial arts, both trade and technical. The trends are toward more instruction in science and mathematics and less on the humanities.
3. To establish the composite-type high school which offers college-preparatory, agriculture, commercial, and industrial-arts courses.
4. To introduce guidance and more extra activities.

⁸⁷ Virgil G. Logan, Mexico's Unified School System, *Journal of Educational Research*, 47 (October, 1953), pp. 117-126.

⁸⁸ W. P. Percival, Plans for the Reconstruction of Education in Canada, *Educational Forum*, 9 (May, 1945), pp. 401-409.

Curriculum principles derived from a study of comparative education. These brief accounts of secondary schools in other countries reveal the variety of curricula which have been built in order to attain the purposes for which the various schools were established. An examination of these curricula with reference to the high school should give one a background which should enable him to analyze more intelligently the curriculum of the high school and revise it in the light of its own unique purposes in a democracy. The revision and reorganization of the curriculum should be a continuous process, but unless it is based on a sound philosophy of the purposes of secondary education, the needs of adolescents, and the values of the school to society, the reorganized curriculum will probably be little better than the original and may even be worse.

A description of these schools either illustrates a valid principle of secondary education in a democracy or is an example of what it should not be. These principles may be summarized as follows:

1. The curriculum should be broad enough to meet the needs of all pupils who attend the school. The Latin grammar school did not do this, for its curriculum was too narrow. The curriculum of the academy almost went to the other extreme and offered any subject a pupil desired.
2. Over and above a general curriculum of constants, elective courses should be offered.
3. The curriculum should be articulated or unified, that is, each grade should build upon and continue the work of the preceding ones and consider subsequent ones. This is being accomplished in the English and French systems.
4. The curriculum should be related to and reflect the life of the community. An example of this is found in the Folk School and the secondary schools of Mexico.
5. The curriculum should be based upon the adolescent as an individual personality rather than as an instrument of the state which may be used for its own glorification. This principle is contrary to the principles upon which the schools of Germany and Italy were reorganized before 1940.
6. No separation should be made between cultural and vocational or practical subjects.

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I6

EDUCATIONAL AND VOCATIONAL GUIDANCE

One of the most important functions of the secondary school is that of determining the interests, capacities, and educational and vocational needs of the pupils and then directing them in a manner consistent with the findings. At the same time, pupils should be trained to be self-sufficient or independent, so they can guide themselves. Teachers have been doing this for years in their daily contacts with pupils, but only recently has there been a conscious effort to do what was formerly done incidentally. According to Kitson, vocational guidance as a recognized form of educational and social service dates only from 1908, and since 1910 it has been firmly established that the public school is the logical and strategic institution in which to give vocational guidance.¹ If schools are organized for guidance and there is a planned guidance program, the incidental activities of individual teachers will be unified and concentrated on the same objectives and greater efficiency will result.

Definition and scope of guidance. The aim of guidance when it first became an organized activity was merely that of finding the vocation for which each individual was best fitted. More recently the concept has changed. It has become broader in scope and no longer involves the idea that each person is best fitted for one vocation only. Two definitions are worthy of being quoted: ²

Guidance in the secondary school refers to that aspect of the educational program which is concerned especially with helping the pupil to become

¹ See Harry D. Kitson, in "Objectives and Problems of Vocational Guidance," ed. by Edwin A. Lee, pp. 259-261, McGraw-Hill Book Company, Inc., New York, 1938.

² Shirley A. Hamrin and Clifford E. Erickson, "Guidance in the Secondary School," pp. 1-2, Appleton-Century-Crofts, Inc., New York, 1939.

adjusted to his present situation and to plan his future in line with his interests, abilities, and social needs.

Traxler believes that the only concept of guidance that can have any real application to the practical problems of counseling is a functional one. He defines guidance, under ideal conditions, as enabling:⁸

. . . each individual to understand his abilities and interests, to develop them as well as possible and to relate them to life goals, and finally to reach a state of complete and mature self-guidance as a desirable member of the social order.

In its broadest sense, the guidance function is included in every activity of the school and involves moral, social, health, personal, and emotional guidance as well as educational and vocational guidance. Since the former phases have been treated under various other topics, as meeting adolescent needs, college-entrance requirements, and free activities, the present chapter will be confined to the major aspects of vocational guidance and the related educational phases.

Aims and functions of a guidance program. The aims of guidance and of a guidance program differ in that the program is the internal school organization for attaining the objectives of guidance as a service to pupils. The aims of guidance as a service, expressed in functional terms, are: (1) aiding pupils to conceive and accept objectives that are socially desirable and attainable with respect to the educational, vocational, and personal phases of life, and (2) helping them achieve these objectives.

The general aims of the guidance program may be expressed in terms of desirable activities and in objectives to be obtained by the teaching staff while performing the guidance function:

1. To obtain cooperative efforts of the teachers in the program so that all will know what part each performs.
2. To study each pupil and maintain cumulative records of his achievements and abilities.
3. To make systematic use of achievement tests and reading and academic aptitude tests and other devices at the option of each school.
4. To develop a system of continuous teacher education, in order that each one will understand and contribute to the cumulative record, under-

⁸ Arthur E. Traxler, ed., "Guidance in Public Secondary Schools," p. xi, Educational Records Bureau, New York, 1939.

stand the function of the tests employed, and study each pupil as an individual personality.

5. To study the relationship between curriculum requirements and individual needs and readjust the curriculum to make it conform better to the needs of groups and of individuals.

The aim of vocational guidance does not differ essentially from other types, for it is one phase of the general program. Its specific purpose is that of assisting the individual to choose an occupation, prepare for it, enter upon, and progress in it.

The usual procedures for doing this are:

1. Assemble information about occupations, and make it available to pupils.
2. Analyze and study each individual, and learn his abilities and potentialities.
3. Counsel with each individual with respect to his abilities and interests and with respect to requirements and abilities needed in various vocations.
4. Help pupils choose some general vocational area.
5. Help pupils select courses or schools or further prepare themselves for some vocation.
6. Help pupils secure positions, and study their success in them.

THE NEED FOR GUIDANCE

When the secondary school was a more selective institution than it is now, the need for guidance was not so great as it is at the present. Before 1900, and in many schools even at present, the typical high-school curriculum was a single kind. There were few electives, and in very small high schools often there were no electives. Pupils pursued the prescribed and only course, and if they could not profit by it, they were eliminated. The majority were intending to pursue their schooling into institutions of higher learning, and the usual high-school curriculum was of the college-preparatory type. Gradually, high schools began adding other courses which could be elected. This expansion attracted more pupils and added to the schools' problem of helping pupils select courses best fitted to their interests and abilities. One of the earliest recognized functions of the junior high school was that of exploration and guidance in order to aid pupils in selecting subsequent courses.

As the high school became popular and began serving the masses rather than the classes, the curriculum expanded further to meet their needs, and the student body became more heterogeneous, until the composition approached a cross section of the total population. This means that one will find persons in high schools who will serve in every capacity and engage in every occupation and profession found in the United States. These two expansions in population and curriculum have created a need for guiding students in the right direction.

Evidences of a need for more intelligent direction of student activities are:

1. *Changes in Schedules.* The increases in the number of courses offered in the high school and the meager knowledge of pupils regarding the content and applications of the courses are responsible for many pupils electing courses which they later drop, or in which they fail.

2. *Failures.* If the American ideal of making the curriculum fit the pupil, rather than the converse, is attained, there should be few failures because of a lack of ability or interest. It is, of course, impossible in the small high school to offer sufficient courses to meet the needs of all those attending. If the school is large enough to offer many subjects, adequate guidance would not merely obviate but would prevent many failures because of maladjustment.

3. *Lack of Motivation.* Motivation is a concern of the entire school. Regardless of the skill of individual teachers in the classroom, if pupils are not well adjusted they cannot be more than temporarily stimulated to learn. On the other hand, if one is motivated by worthy goals rather than artificial goals, such as prizes, rewards, marks, and avoiding punishment, and is directed into a curriculum in which he pursues courses in which he is interested and for which he recognizes a need, artificial stimuli are not needed.

4. *Poor Adjustment in College.* Not all but at least some of the maladjustment in college can be traced to a lack of guidance in secondary schools. When beginning freshmen in universities on being asked, "In what college do you intend to enroll?" reply by asking, "What colleges are there?" someone along the line has been guilty of neglect. Failures, elimination, changes in schedules, and transfers from

one college to another are all evidence that college students are still faced with the problem of learning how to direct their own lives.

5. *Withdrawing before Graduation.* One can make a good case for the claim that failures, retardations, and withdrawal before graduation are due to maladjustment and to a lack of guidance. However, a guidance program will never operate so perfectly that it will correct all these evils, though it will greatly reduce them. The large number of students who withdraw from college before graduation is a problem to be considered by the secondary school as well as by the colleges and universities.

6. *Vocational Misfits.* It would be an impossibility to determine with any degree of accuracy the extent and number of persons who are not fitted physically, mentally, or socially for the work they are doing. This is evidenced by the turnover in industry, unemployment, ill-health caused by the nature of one's work, and the lack of interest, skill, and aptitude of those following various vocations and of those who are unhappy in their occupations. This problem is further accentuated by the large number of fields of work and the difficulty of becoming acquainted with them.

It would be a bold statement indeed, and one which could be neither defended nor demonstrated, to say that since a lack of guidance causes these maladjustments a good guidance program will eliminate all of them. Ideally, such a program is not out of the realm of possibility, and the prevention of all these evils is a worthy goal; but with our present knowledge, measuring instruments, and secondary-school system the most we can hope to do is bring about as much improvement as possible. However, if we are to continue our efforts toward the goal of universal secondary education, it will be necessary to construct curricula which will benefit all who attend and guide pupils into them.

WHO SHOULD GUIDE STUDENTS?

In the previous discussion it was assumed that the school is the most logical institution to undertake the task of guiding pupils. There definitely is a need, and if the school does not accept the responsibility, who should? Three other agencies might be considered: the individual himself, parents, and pseudo scientists.

1. Self-guidance. Ultimately, the individual should guide himself. The development in each individual of the ability to guide and direct his own activities intelligently is the ultimate aim. But until he develops this ability, he needs direction from others; otherwise, his own efforts may be quite costly, or even disastrous. Adolescents are not gifted in self-analysis. They act on impulses and often do more emotional than rational thinking. They often select courses because they like the teacher or some pupil in the course; a college because of its football team; a vocation because they can ride all day in an automobile. Such selections are made without knowledge of or reference to capacity, needs, or true interests. The usual self-directive methods are trial and error, which often result in changes in courses, curriculum, school, and vocation, or in failure.

2. Parents as Guidance Counselors. Parents have maturity, judgment, experience, and a keen interest in their children's welfare as qualifications for guidance counselors. Likewise, they have ample opportunity to observe and study their own children and discover their interests and abilities, but there are several factors which often cause parents to plan poorly for their own children.

Many parents have been thwarted in their desires in some field because of a lack of opportunity, lack of ability, or of various circumstances they could not control. They see in their children, then, a fulfillment of these desires. They try to achieve through their children or complete a career in which they failed. Under such conditions, the children have their lives planned by the parents, who either do not know or are blinded to their interests and abilities.

There is a tendency to place a halo around some vocations and condemn others. The usual parent wants his children to follow the professions or at least the "white-collar" jobs. Still others want their children to have fewer hardships in life than they had and believe certain paths are easier or better for their children than others. Some years ago a farmer remarked, on sending his son to college, "I want him to study Latin so he will not have to work as hard as I did in life." To this farmer, the study of Latin was one of the marks of a professional man, and to him it meant an easier life than that of farming.

Still other parents want their children to live over those experiences they have enjoyed and seldom stop to consider the possibility that their children might not enjoy them. There is, of course, a relation-

ship between the abilities of parents and those of their children, and if the parent had an aptitude for his work, his son or daughter perhaps will inherit some ability in this respect. But the relationship is not close enough to predict the ability of a pupil from a knowledge of his parents. The factor of interest might show a closer correspondence, since it is due to training and one has a good opportunity to get acquainted with the interests of his parents.

If parents could forget their own personal interests and ambitions in directing their children's lives with respect to school curricula and vocations, the majority of all guidance could be left to them. Parents will always have a great responsibility in moral, personal, and social guidance, and many are qualified in giving vocational guidance. The best situation is obtained when parents and teachers cooperate in guidance. Neither can leave the responsibility wholly to the other.

3. *Pseudo Scientists*. Even in this enlightened age, thousands of persons place confidence in a group of persons who employ a false science in foretelling the future and in giving advice on almost any subject. Many high-school graduates consult them with reference to vocations and probable success in some enterprise. Proof from the psychological laboratories that there is no validity in physiognomy, graphology, numerology, palmistry, and other false sciences has not ended the practice.⁴

The phrenologists have recently invented a machine which fits over the head and which, they claim, lists one's strong and weak traits. Astrologists are still selling horoscopes, although the group has had centuries to prove their claims without avail.⁵ It is almost a daily occurrence to hear one claim he has had his palm read or his handwriting analyzed, or it is common to hear parents or adults say of a child, "He has the hand of a musician," or a "surgeon's fingers," or "His high forehead denotes intelligence." A good guidance program in the school will do much to counteract the tendency on the part of many pupils to substitute such false methods as these for the use of intelligence in the solution of their problems.

⁴ See Donald G. Patterson, "Physique and Intellect," Appleton-Century-Crofts, Inc., New York, 1930, for proof that there is little or no relationship between various physical measurements and mental traits; see also Graydon L. Freeman, "Physiological Psychology," pp. 535-550, The Ronald Press Company, New York, 1934.

⁵ Hamrin and Erickson, *op. cit.*, p. 11.

The school as guidance agency. The school is the logical guidance agency, not because others are limited in their abilities to perform this service, but because guidance is a natural and legitimate part of the school's work. The school has an opportunity to study, observe, and measure pupils in order to determine their capacities. It has trained workers who are familiar with guidance techniques, and, finally, teachers are more able to make an impartial evaluation of pupils. They have the interests of pupils at heart, but because they have so many under observation, they are not so likely to overestimate the capacities of any one since there are so many others with whom to compare him. Guidance in some form or other is being practiced in every school by all teachers regardless of whether they are conscious of it or not. In helping pupils select courses and arrange their schedules, introducing them to the various fields of study and the world of work, and giving them information concerning further schooling, guidance is constantly being given by all teachers.

The organization for guidance. The time is past when the responsibility for the administering of a guidance program will be delegated to one individual such as the principal of the school or a guidance counselor. This has become a part of the work of every teacher in the school. Furthermore, the program, once initiated, is a continuous one. Occasional emphasis and sporadic efforts will not suffice, for each pupil must be counseled from the time he enters into other institutions or into some field of work, and as rapidly as one group graduates, new classes enter. A pupil cannot be guided once for all time.

An elaborate organization is not essential. The entire work should be directed by an administrative officer or someone delegated by him. A suggested plan is to delegate to each teacher a number of pupils, about whom she should secure pertinent information, keep necessary records for recording this information, and then through a series of interviews counsel and direct each pupil assigned to her. A teacher may be the counselor of a single group through a period of years or be assigned a new group each year. If the former plan is practiced, a teacher will have a better opportunity to profit by different opinions. Such teachers may be known as "class advisers," "home-room teachers," or "counselors."

Under the provisions of the George-Barden Act^a Federal funds

^a See provisions of the act in Chap. 14.

may be used to employ a guidance counselor either full or part time. These teachers have had special training in counseling and receive further training through literature supplied by the state departments of education under whose direction they work. Given office space and equipment, including filing folders for each pupil, tests and inventories of various types, and pamphlets and books on various occupations, they are in an excellent position to take the leadership in guidance.

Guidance, however, is not the work of one teacher. All must take part, for it is a process that is going on at all times in every class, in all activities, and involves all contacts teachers have with pupils. Information is collected when pupils are observed and when tests are given; information is recorded when the teacher finds an opportunity; information is imparted in each class, where further knowledge of pupils is gained and where pupils have opportunities to explore various fields; information concerning interests is gained by observing leisure-time reading in libraries; in other words, guidance concerns the entire school life and home life of an individual. How then can one teacher be given this entire responsibility?

METHODS OF ACQUIRING INFORMATION ABOUT PUPILS

Before any directing, guiding, or counseling of pupils may be practiced, the teacher must secure all the information possible for her to acquire about each pupil. The information will be that pertaining to his interests and general and specific abilities and aptitudes and all data which might have prophetic value for the pupil's future activities. The only way to predict what one will do in the future is to observe what he does at the present and what he has done in the past.

There are two general methods of gaining information concerning pupils: the formal method, or by means of tests and inventories, and the informal, or by observations over a period of time. The former has its greatest value in securing information about a large number of pupils whom the teacher has little opportunity to observe carefully or about those who have little opportunity to display their interests and abilities through activities. Still another great value of tests lies in their use as a check on judgment. If there is a wide disagreement between judgments of interest, ability, and aptitude and formal meas-

urements of these, little confidence can be placed in either and further study and additional tests are needed to arrive at a valid and reliable conclusion.

Formal methods of securing information. Many tests, scales, and inventories are available for measuring all phases of pupil characteristics. An evaluation of various tests, instructions for administering them, and an interpretation of the results requires a separate volume. For detailed information concerning them, one may refer to manuals accompanying the tests or to several volumes dealing with the subject.⁷

The usual tests given are:

1. General intelligence tests, verbal and nonverbal.
2. Academic-achievement tests.
3. Inventories:
 - a. Personality.
 - b. Vocational interest.
4. Specific aptitudes:
 - a. Mechanical.
 - b. Clerical.
 - c. Scientific.
 - d. Artistic.
 - e. Musical.

Two of these tests, general intelligence and achievement, should be given to the entire student body; the others may be given to special groups or individual pupils according to the circumstances or need.

Informal methods. The term "informal methods" is used to refer to all methods used in gaining information other than by tests. Information may be secured from the following sources or methods:

1. *Anecdotal Records.* All teachers in the school should record any activities of pupils which might be of value in guidance. These may be handed directly to the teacher to whom the pupil has been assigned or sent through the school office. Activities giving an insight into special interests, reading, hobbies, health, or special talents should be included.

2. *Interviews.* During interviews, guidance officers can, by direct questioning and observing, determine the pupil's stated interests, his intentions with respect to schooling and vocations, his personal prob-

⁷ Frank G. Davis and Pearle S. Norris, "Guidance Handbook for Teachers," Chap. XIII, McGraw-Hill Book Company, Inc., New York, 1949.

lems, grievances, likes and dislikes, his family background, and his vocational experience. Not one, but many interviews are recommended.

3. *Observation.* Much can be learned about a pupil by observing his reading and study habits, his social contacts, and his general conduct and participation in activities. Special talents, especially in music, art, literature, and science, may be detected.

4. *Home Visits.* Although there are many exceptions, the general culture of a pupil's home is a good indication of some of his probable future activities. The occupation of his father, the schooling of the various members of the family, and the opportunities for advancement in the home have prophetic value. Likewise, a large number of a pupil's interests have their origin in the home. Through home visits, teachers may also determine what hobbies and what recreational activities the pupil engages in and the books and magazines he probably reads and from a consultation with his parents learn additional facts which might help in counseling.

The home background will also reveal whether the pupil is encouraged to attend school or not, is upheld in delinquency or trained in ethical character, and whether, because of economic conditions, he is likely to continue his schooling or be compelled to enter industry at an early age.

5. *Vocational Experience.* Many high-school pupils have had vocational experience either during summer vacations or before and after school hours. From this experience, one may learn whether a pupil showed any particular or special aptitude in the types of work he did, and his interests in these fields. If necessary, a talk with his employer will substantiate or act as a check on the pupil's own estimate of his success.

6. *School Activities and Elective Courses.* One can determine ability and aptitude in required courses, but an inventory of interests must be made from elective courses and activities, provided, of course, that participation in the activities is purely optional. Activities offer an outlet for self-expression, give one an opportunity to explore various fields, discover new interests, and, perhaps, uncover an undeveloped ability or talent.

7. *Physical-examination Record.* Success in schoolwork as well as future activities is often impaired by poor health or physical defects. A physical-examination record should be a vital part of guidance data,

for various defects of sight and hearing or frequent absences due to illness may reveal the cause of poor schoolwork, lack of interest, and retardation. On the vocational side, it will reveal the fields of work a pupil should be encouraged to enter or avoid.

8. School Marks. One function of educational tests is to predict vocational and academic success, and academic success can be used in predicting vocational success. If a student has already shown his ability to achieve in a subject through school marks over a period of years, more confidence can be placed in the marks than in the prognostic test, for the latter can sample his ability only for the duration of the testing period. For example, a prognostic test might indicate an average ability in algebra for a given pupil who, however, actually revealed much more than that when he pursued a course in algebra. The greatest confidence can be placed in the latter, provided that reliable marks are given.

There are some subjects closely related to certain vocations and professions, as mathematics to engineering and mechanics; science to medicine; and English to journalism. One who does not display any marked ability in key subjects has a poor chance to succeed in certain fields. Furthermore, success or failure in beginning courses is excellent evidence of success or failure in subsequent courses.

Exploratory courses in the junior high school are excellent indicators of courses to be avoided or pursued in the senior high school. Exploration is especially recommended in the fields of business education and languages. The courses should be so organized and the content so selected that pupils will be able to profit by them even if they are not pursued further, and they should become well enough acquainted with the subjects so that they will not have false interests in them. With the aid of the teacher their own aptitudes can be detected.

RECORDING GUIDANCE INFORMATION

Counselors should never try to keep pertinent data concerning pupils in their heads or on records which are carelessly kept and filed. Several recording devices may be employed, such as the card file, with the cards filed separately or in packets, and the filing folder, on the back of which provision is made for recording standard or uniform data and in which one may file additional information. The latter

method seems to have numerous advantages. It makes provision for formal and informal records and keeps all the materials on each pupil together. There are several guiding principles for keeping records:

1. They should be cumulative, that is, additional information should be added to existing data.
2. Records should follow pupils from grade to grade and, if possible, from school to school. It is a waste of time for each new teacher who helps guide a pupil to be forced to begin "from scratch" and be denied the findings of others.
3. They should be kept by home-room teachers or counselors, and any teacher who has information should send it to the appropriate person.

Items on standard records. It is a waste of space and time to have provisions for securing needless information on records or to secure information not used. The basic or standard forms should contain a minimum number of items, carefully selected, and if additional ones are needed, they may be recorded on separate sheets of paper and filed in the folder. Basic records should contain the following data, which are considered essential:

1. Personal data: name, age, date of birth.
2. Family: occupation, race, schooling, members.
3. Residence.
4. Home conditions.
5. Elementary scholarship.
6. Health.
7. Interests.
8. Results of elementary achievement and intelligence tests.
9. High-school scholarship.
10. Results of high-school achievement and intelligence tests.
11. Aptitude tests, specific and general.
12. Honors received.
13. Extra-activities record.
14. Vocational experience.
15. Postgraduate record of employment or further schooling.

⁸ See Traxler, *op. cit.* Chapters IV, V, and VI are devoted to the cumulative record and its use.

IMPARTING VOCATIONAL INFORMATION

Before students can solve any of their puzzling and perplexing vocational problems, either with or without help, they need two types of information: (1) knowledge of the world of work and the many vocations and (2) knowledge of themselves.

Many pupils make unwise vocational choices because of a lack of information, faulty information, or the high social and economic status of various vocations. Likewise, faulty information or a lack of information about themselves may lead to unwise solution of problems. If one is not acquainted with his own abilities in comparison with those of the persons engaged in a particular vocation, he will not know his chances of success or failure. It is not unusual for a pupil of low abilities to elect a major profession and one of high abilities to choose one requiring less ability than he possesses. Pupils are given knowledge about themselves through the interview, and knowledge and information about vocations by various methods.

Regular courses. No teacher, in any course, should ever miss an opportunity to point out vocational avenues leading from the subject being taught. If the teacher's knowledge of her subject extends little beyond the textbook, this phase of her work will be slighted. Alert teachers will keep in touch with vocations and analyze the needs of those engaged in them. While discussing teaching opportunities in a university class some years ago, a senior spoke up and said, after a particular field was mentioned, "That is just what I would like to be." With a loss of over a year's work, he started preparing himself for this vocation. If he had been introduced to this field earlier in life, much time would have been saved. Many persons pursue certain vocations merely because they are not acquainted with any others.

In rural schools, there are some who hold to the idea that teachers should teach in such a manner as to "keep boys on the farm." There is no more reason for encouraging every pupil in a rural school to be a farmer than to encourage all in an urban one to be factory workers. There should be no essential difference between the guidance program and the attitude of teachers toward various vocations in rural and urban schools.

Teachers should avoid the usual error of speaking only of the major

professions and assuming the attitude that all high-school pupils should limit their thinking to a consideration of the higher vocations. Several decades ago, this assumption had more validity, but now that the masses are attending high schools, they are no longer so selective. This tendency on the part of teachers is another of the many reasons for the wide discrepancy between pupils' choices and the number engaged in a field or the opportunities available. As shown in Table 17, the

*Table 17. Vocational Choices of 1,000 Boys and the Number of Workers per 1,000 Engaged in These Vocations**

<i>Vocational</i>	<i>Choices per 1,000</i>	<i>Workers per 1,000</i>
Physicians	105	5
Lawyers.....	64	8
Automobile mechanics.....	51	19
Electricians.....	33	11
Stenographers.....	13	2
Clerks.....	4	89
Barbers.....	5	10

* From Walter Van Dyke Bingham, "Aptitudes and Aptitude Testing," p. 108, Harper & Brothers, New York, 1937.

choices are numerous in the professions in which there are few opportunities, while the choices in such fields as clerking and barbering are few compared with the opportunities.

Free activities. Free activities should be an outgrowth of and closely related to the regular curriculum and should further the same general aims. It follows, then, that activity sponsors should impart vocational information through them as well as in regular course work.

Excursions. An excellent manner in which to acquaint pupils with various vocations is by means of the excursion. To have value in this respect, the teacher should make this the specific aim, rather than determining a manufacturing process or some other process of operation. Visits should be well planned, and only those who have shown at least some interests in a given field should join the visiting group. Every local community offers opportunities, such as trips to banks, stores, courthouses, factories, industries, and the offices of business

and professional people. Since little of the life of professional workers can be observed in their offices, visits to these are perhaps less valuable than others. The professions should be studied in another manner.

Assembly talks. Occasionally some professional man from the community may be invited to speak before the student body as a whole or before small groups on the training, requirements, and opportunities in his profession. The one caution to be observed in this practice is the danger of lowering the subprofessions and skilled trades in the eyes of many pupils by ennobling and stressing the professions. This might be prevented by having a speaker discuss a profession only before those revealing a definite interest.

Career days. In some schools, one or more days during the school year are devoted to the study of careers. On these occasions, persons engaged in various types of vocations are invited to meet and confer with groups of students who have selected a particular vocation or are interested in one. Arrangements are also made for students to have interviews with counselors, hear talks on selecting a lifework, or view motion pictures on careers. It is also a good time to place vocational literature in conspicuous places and urge students to read and study.

Vocational tryouts. Many schools are practicing what is known as the cooperative plan, that is, securing part-time employment either with or without pay for those pupils who will, in all probability, enter industry immediately following, if not before, graduation. The time not spent in employment is spent in school. Close contact is kept with the pupil by the school officials who cooperate with his employer. After a reasonable tryout period, if the pupil does not display an interest or aptitude he should be transferred to another type of work.

This plan should be practiced by all high schools, but not all pupils should be included in the plan. This, perhaps, is one of the best and most valid methods of determining fitness for any type of skilled work. If a pupil were to pursue these tryout periods after graduation without guidance, as many do, he would perhaps take the first job he could get and, even though he had only mediocre success and little interest, would continue in the position because of the difficulty of locating something better.

Open-shelf library. Books pertaining to vocations which are written for high-school pupils, together with pamphlets and magazines, should

be placed on open shelves where they will be available to all pupils, who should be encouraged to browse among them.

The vocations course. Besides informing pupils of various vocations, a course in occupations has educational value in showing the interdependence in all fields of work; but there is some doubt as to the advisability of a separate course in this field. If many occupations are studied, the amount of time devoted to each one will be too brief to be of value; if few, then only a few pupils will find the vocation in which they are most interested. There will be a tendency also to shift all the responsibility of imparting vocational information, and perhaps other phases of the guidance program, to the occupations teacher. Furthermore, individual differences are so varied they preclude group instruction of this type. To be of value, it would have to be taught on an individual basis, and that can best be done by the other methods discussed. Considering it from all angles, the course cannot be highly recommended.

INTERPRETATION OF GUIDANCE DATA

It is not a difficult task to gather information concerning pupils, to administer various types of tests, and to make inventories, but it is extremely difficult to interpret these data. The interpretation is by far the most important phase of the entire program and the one requiring the greatest amount of skill, knowledge, and judgment. Many precautions must be observed, or untold harm may be done.

No teacher should ever attempt to interpret vocational information until she has studied carefully what each type of information indicates. Especially is this true with reference to test results. Not only should one study the test manuals very carefully, but also some text on the subject. The authors' experiences with parents has convinced them that many are skeptical of and place little confidence in test results merely because of their misuses and false interpretations by teachers and administrators who did not know how to interpret them.

The theory of aptitude testing. An aptitude test is merely an achievement test with known validity with respect to some capacity which will give an indication of future performance. These may be gen-

eral or specific. The fundamental assumptions, principles, and facts on which prognostic testing is based may be summarized as follows:

1. *What one has done in the past and his present performance are indicators of what he can or will do in the future.* If this were not true, one could never predict any future activities of individuals. The movements of inanimate objects not guided by intelligence, but which have a pattern of action, as planets, may be predicted accurately. Those guided by pure chance cannot be predicted. Individuals are guided by chance, emotions, intelligence, tastes, whims, fancies, circumstances caused by external and internal influences, economic and social conditions, and other people. This causes human variations and changes in patterns of conduct. Likewise, pupils in high school are maturing, not mature, and in the process of change. *Therefore, exact predictions are not possible with human beings.* However, patterns of conduct are established quite early in life and change rather slowly, so that within limits one can determine the future from past and present activities.

2. *Aptitudes are rather stable.* A child who displays an aptitude in art, for example, unless altered by environmental circumstances will display the same talent on reaching maturity. Informal observations of this are common. One would be quite surprised if he had a friend who was talented in art and who a few years later was found to have no art ability, or to find one not so talented who suddenly became a great artist. This fact makes it possible to discover aptitudes at an early age and begin training, with confidence that the person being trained will not wake up some morning without the aptitude.

3. *Pupils are not predestined to fill some specific niche in this world.* We need not fear that if this niche is not found they will be forever out of place. Most persons can do many things equally well and enjoy doing one as well as another, provided these are congruous with their abilities. There is no such thing, for example, as one being a "born aviator," for there are many things a good aviator could and can do. People are quite capable of making adaptations, and if circumstances do not lead them into one field, they can find success in another. Again, this statement is true only within certain limits. In this modern world with its division of labor, there are many occupations so closely resembling each other that one can succeed in a large number of them.

4. People not only differ from each other but differ within themselves. Most traits of an individual, like those of many individuals, are normally distributed, that is, most of them cluster around a central tendency with few of them deviating either very high or very low. Although there is a marked positive correlation between the amounts of all mental traits possessed by an individual, this does not mean that they are all uniform, but rather that they all seem to be dependent upon a general factor.⁹ However, there are exceptions to the general statement that one displays about equal abilities in various traits. These exceptions, when they occur, are found in mathematical, linguistic, mechanical, graphic, and musical abilities, and of these five the graphic and the musical appear not to agree closely with general mental ability. While mechanical ability is closer to mental ability, it is not so close as linguistic and mathematical.¹⁰ Sensory abilities do not cluster as intellectual abilities, while the widest deviations are in motor abilities, which seem to be independent of each other.

There are two implications of these findings for guidance: (1) a general estimate can be made of all a pupil's traits by sampling; and (2) if one has any special abilities, they are the most logical ones to be discovered and trained. One should avoid work in his special disabilities, unless they are really needed in a chosen field. In that case, past experience indicates that they can be improved through training.

Characteristics of good aptitude tests. Before selecting an aptitude test, one should have a very definite purpose in mind for its use. Its value, then, will be in proportion to the extent it actually serves its purpose. Aptitude tests are limited in their use, and one should never expect a test to do more than it was designed to do. The chief characteristics of tests which may be used as a basis for their selection are:

1. Validity. Validity is defined as the ability of a test to do what it purports to do. Aptitude tests are validated by determining the extent to which they differentiate between those who have achieved success in a certain field and those who are definitely nonachievers. Proficiency in any occupation which can be completely analyzed can be predicted. The reason no tests have been made which select salesmen

⁹ Frank S. Freeman, "Individual Differences," pp. 61-62; Henry Holt and Company, Inc., New York, 1934.

¹⁰ *Ibid.*, p. 291.

is that there seem to be no unit characteristics that can be analyzed which are symptomatic of success in this field. Music, for example, lends itself to analysis to such an extent that one can make rather accurate measurements of musical talent.

2. *Reliability.* The degree to which a test gives consistent results and can be depended upon is called "reliability." It may be reliable, but not valid.

3. *Administrability.* Some tests can be administered easily. Most modern tests are so constructed that with little training a teacher can administer them with ease, but there are some, as the Stanford-Binet, which require a skilled person to administer. Teachers not especially trained in administering tests should not attempt to do so.

4. *Types of Norm.* One of the essential features of interpretation lies in the type of norms. They should be based on a wide sampling and stated so that one can interpret scores in terms of probabilities of success or failure in the fields for which the test was constructed.

5. *Ease of Scoring.* The majority of tests are supplied with scoring keys and are designed to make scoring relatively easy. Some, like the Strong Vocational Interest Blank,¹¹ are complicated and can be scored only by a trained person.

6. *Objectivity.* Regardless of who scores the tests, if the same results are secured, the test is said to be objective.

7. *Cost.* The most expensive test is not always the best, or vice versa. The least expensive test which meets all requirements is the logical one to select. It is false economy to purchase certain tests merely because they are inexpensive.

These standards should always be considered in the selection of tests, and those which have the highest rating on these factors are to be preferred. To facilitate the application of these standards, one may employ a score card.¹²

Intelligence and aptitude. Intelligence-test scores cannot indicate the occupation one should follow. They indicate the degree of mental ability, but not the direction in which it can be applied. If the various vocations are ranked from manual labor through skilled trades to the professions, there will be a successive increase in the amount of mental

¹¹ Strong's Vocational Interest Blank, Stanford University Press, Stanford, Calif.

¹² A. S. Otis, Scale for Rating Tests, *Test Service Bulletin 13*, World Book Company, Yonkers, N.Y., p. 6.

ability required for success from the first to the last, and one who is not intellectually strong would have little chance of success in the professions, but at the same time, one with high intellectual ability may not necessarily be qualified for any particular profession, for he may not have other necessary traits to accompany it. Furthermore, one is far more likely to be happy in a vocation in which he can excel or have a relatively high degree of success than in one beyond his ability in which he finds the competition so keen that he can enjoy only a moderate degree of success. Intelligence-test scores, for this and other reasons, predict failure better than success, for if one's intelligence quotient is low, he cannot succeed beyond certain levels; but if it is high, that fact alone is no guarantee of success, for other factors in success such as interest, tastes, ideals, attitudes, industry, social ability, and personality are not measured by them. Furthermore, intelligence tests indicate general ability—not certain specific aptitudes, as mechanical ability, art, and musical talent, which are needed along with general mental ability for success in certain fields. Although the majority of those engaged in professional work make high scores on intelligence tests, the range of scores is so wide that no critical scores can be selected below which one cannot succeed. On the other hand, a high degree of intelligence may be a handicap in certain occupations, especially those of a routine nature requiring little or no mental exertion. Studies have shown that there is greater turnover in routine jobs among those who have high intelligence than among those whose mental capacities are more in harmony with the tasks performed.

Intelligence and academic success. The extent to which intelligence-test scores are related to academic success and occupations may be designated by coefficients of correlation. These coefficients range from 0 to 1.00 and may be both positive and negative. Zero means no relationship, 1.00 means perfect correspondence, while values between zero and 1.00 show degrees of relationship. A coefficient must be .80 or better to have great value for individual prediction, while coefficients of .40 and above have value in dealing with groups.

Intelligence-test scores are valuable in guiding pupils in their selection of courses. From this criterion, it has been estimated that one should have an I.Q. well above normal in order to gain much from a course in Latin. Such subjects as algebra, geometry, physics, and chemistry require a high degree of ability to profit from them. However,

the lack of perfect correspondence between intelligence and marks is due to the fact that one can compensate for a lack of ability by harder work, and because other factors, as study habits, reading ability, and past experience, also contribute to achievement. Coefficients of correlation usually found between intelligence and achievement in various subjects are shown in Table 18.

Table 18. Coefficients of Correlation between Intelligence-test Scores and Achievement in Various Academic Subjects

<i>Subject</i>	<i>Coefficients of correlation</i>	<i>Subject</i>	<i>Coefficients of correlation</i>
English.....	.44-.47 *	Social studies.....	.27-.52
History.....	.17-.41 *	Latin.....	.17-.44
Algebra.....	.47-.558 †	Industrial arts.....	.10-.15
Geometry.....	.44-.542 †	Fine arts.....	.22-.30
Physics.....	.76 ‡	Home economics.....	.12-.41
Foreign language.....	.49 §	Commercial.....	.01-.18

* A. M. Jordan, "Educational Psychology," p. 363, Henry Holt and Company, Inc., New York, 1928.

† J. Murray Lee and W. Hardin Hughes, Predicting Success in Algebra and Geometry, *School Review*, 42 (March, 1934), pp. 188-196.

‡ A. W. Hurd, The Intelligence Quotient as a Prognosis of Success in Physics, *School Review*, 34 (February, 1926), pp. 123-128.

§ J. N. Jordan, Prognosis in Foreign Language in Secondary Schools, *School Review*, 33 (September, 1925), pp. 541-546.

|| J. Murray Lee, "A Guide to Measurement in Secondary Schools," p. 81, Appleton-Century-Crofts, Inc., New York, 1936.

Interest and aptitude. Regardless of one's capability in some field, if he does not have a readiness to acquire proficiency he will not achieve any great success, for he will not have the necessary drive required to train himself. Thus, interest should be included as an important phase of aptitude.

There is some positive relationship between interests and educational success as measured by intelligence tests, school marks, achievement tests, and interest inventories, but the relationship is too low to be of any value in predicting success.¹⁸ Fewer studies have been made regard-

¹⁸ Douglas Fryer, "The Measurement of Interests," pp. 195ff., Henry Holt and Company, Inc., New York, 1931.

ing the relationship between interests and vocational success than between them and academic success, but those made show that one cannot predict vocational success from estimates of interest. The theory persists, however, that interests are causative factors in success over a long period of work.¹⁴ One must have a motive to succeed in any task, but it does not have to be interest in the task itself. The importance of interest as a motivator in both academic and vocational work lies in the fact that one is happier if he has an interest in the task itself rather than in external activities. However, Strong reports that several investigations indicate that those who have a low interest score on the Strong Vocational Interest Blank are very likely to fail in courses pertaining to that occupational interest.¹⁵

Since interest inventories have little relationship to ability, they evidently measure factors other than intelligence; so they will be more likely to indicate the curricular or vocational choices students *will* make rather than the ones they *should* make if they are to be congruous with aptitude and ability. But even this is not always true, for Strong reports that 18 per cent of a group of college students entered professions in which they had no interest¹⁶ and 50 per cent of a group of workers, mostly pursuing "white-collar jobs," frankly admitted they were not interested in their work.

Interests may be measured informally by observation of activities, leisure reading, classroom responses, and written work or, formally, through inventories. Perhaps the best-known inventory is the Vocational Interest Blank by Edward K. Strong.¹⁷ Although it may be administered to pupils under eighteen years of age, the same degree of confidence cannot be placed in the scores as for students above this age. Although this method seems to be as reliable as any employed, there are three sources of inaccuracy in reported interests: informational errors, or those due to faulty information; generalization errors, or those due to false conclusions from known facts; and prevarication. The latter is due to a tendency to report an interest in those things which are associated with a higher social or economic level, or because

¹⁴ *Ibid.*, pp. 220-221.

¹⁵ Edward K. Strong, Jr., "Manual for Vocational Interest Blank for Men," p. 4, Stanford University Press, Stanford, Calif., 1939.

¹⁶ *Ibid.*

¹⁷ *Ibid.*

it is considered "smarter" to show an interest in some things than in others, for example, to read Shakespeare rather than popular literature.

Achievement and aptitude. If one shows his ability to achieve in some subject basic to proficiency in a vocation, this subject has predictive value for that calling. Mathematics is necessary and basic in engineering, physics, and electrical work. More boys fail in West Point because of mathematics than any other subject. In a boys' vocational school, an instructor remarked to one of the authors that one of the most general handicaps of the boys in learning mechanics was a poor knowledge of the fundamentals of arithmetic, especially of common fractions.

Likewise, achievement in science, languages, and art will indicate probable success in certain vocations, and also in future courses either in high school or in college. The relationship between high-school and college marks is not perfect but is positive, and high-school marks are the best indicators of college success.

Because school marks often include factors other than achievement, standardized achievement-test scores are more valuable for some purposes than marks. Achievement-test scores will indicate success not only in subsequent courses in the same field but also in related fields. The relationships, in terms of coefficients of correlation, between achievement in various subjects and subjects in the same or different fields are positive and range from .40 to .70. This shows that there is a common causative factor of success in related fields.

Special talents and aptitudes. Special abilities such as art, music, and clerical and mechanical aptitude may be detected by observation of pupil activities and responses, by actual performance in exploratory classes, or by means of tests. In each of these fields, tests have been constructed, such as the Meier-Seashore Art Judgment Test, the Kwalwasser-Dykema and the Seashore Musical Aptitude Tests, the Detroit Clerical Aptitude Examination, and the Minnesota Mechanical Aptitude Tests. These tests should be given only to those who show some ability or who desire such tests, as it would be costly in time and money to give them to all pupils of the school.

Personality. One's fitness for certain vocations is not complete unless he possesses the right kind of personality for the work. Those engaged in distributive work, as salesmen, and those in contact with people, as ministers, doctors, teachers, and lawyers, require a personal-

ity of the type that is sociable, while in those fields in which there are fewer contacts with people the same degree of sociability, though not a handicap, is not so essential.

COUNSELING

Interviewing pupils and conferring with them concerning their academic and vocational problems should not be confined to a single interview at the time of graduation but should occur at intervals throughout the entire schooling of an individual. There are at least three types of interviews, one for securing information and getting better acquainted with the pupil, another for academic counseling, and the third for vocational counseling. These interviews should be as informal as possible, and pupils should be encouraged to request them. Their success will depend, on the one hand, upon the extent to which pupils are caused to feel free to express themselves and have confidence in the counselor and on the other, upon the attitude of the counselor, his knowledge of the pupil, and his ability to interpret guidance data.

Counselors should seldom give advice. One is never certain what is "best" for an individual. If a pupil is inclined to pursue one course and available information indicates that his chances of success in it are not great, he should be informed of his low chances and an attempt made to get him into another field. He should never be told he will fail in some activity or be assured he will succeed in some other type, regardless of the chances of failure or success. The final choice in any problem requiring a selection should be reserved for the student. If his choice is poor, further study, experience, and knowledge of himself will usually reveal it to him and he will make his own change.

Common sense should be constantly observed. A wise counselor will always keep in mind the chances that test scores may have placed the pupil in the wrong category owing to the fact that at best they are not perfectly reliable and valid, that mistakes might have been made in tabulation or scoring, or that the pupil did not perform at his best while taking the test. Another point to keep in mind is that guidance data are not solutions to problems. They are merely the materials with which one works in solving problems.

An example will illustrate the misuse of data in guidance. A certain

school required that all candidates for admission make a score above a certain critical point on an intelligence test before they would be admitted. This critical score was determined from past experience and was designed to eliminate failure prospects. Through an oversight, a student who was not given the examination was admitted. Four years later when the student was ready to graduate, the oversight was detected, and he was told he would have to pass the entrance examination before he could graduate! The best evidence of achievement is *achievement*, not predicted achievement by means of some instrument. Naturally, if we can help students avoid failure, we have done them a favor. If this student had been given the test when seeking admission and had failed, he would probably have entered another school or field of work where chances of success were greater for one of his capacities. By excluding all whose scores were below this level, many failures were prevented, but at the same time several persons who would have succeeded were denied admission. Some say all should be given the right to try and that it is better to have tried and failed than never to have tried at all.

Follow-up work. Too often we have the attitude of finality with high-school graduates. Because graduates no longer attend the school or because they have completed a prescribed course of study is no reason for assuming that they are competent to direct their own lives and that the school should lose sight of them. They should be observed in whatever they do, whether they enter industry or continue their schooling, for their success or failure is the school's chief evidence of the validity and efficacy of the entire guidance program. Graduates should be encouraged to return to the school at any time for *counseling and assistance*. The *cumulative record* should make provision for recording follow-up data and should include such factors as types of employment, duration of positions, and ratings of employers. If a pupil continues his education, records should be kept of his academic success.

Whether an employment bureau should be maintained is a matter of choice and opinion. Certainly it is a part of the school's work to help place pupils in industry.

Evaluating the guidance program. There are many objective criteria, as well as subjective estimates, which may be employed to evaluate the guidance program. In planning the original program and

organizing for guidance, the aims and objectives should be formulated and desirable outcomes stated. In the light of these and established goals, the evaluation should be made. Worthy aims of a guidance program, similar to those mentioned early in this chapter, may be used as guiding principles of evaluation. The evaluation should be concurrent with the program itself, rather than after it has been in operation for some time.

The evaluation should include objective evidence concerning these divisions of the guidance program:

1. Teachers:
 - a. Extent of participation and interest in the program.
 - b. Amount of training in service.
2. The pupils:
 - a. Extent of reduction of elimination, failures, and retardation.
 - b. Extent to which pupils are adjusted to their curricula.
 - c. Degree of success after graduation.
3. The curriculum:
 - a. Extent to which curricular development has proceeded in the light of pupil interests and abilities.
 - b. Degree of relationship between curricular requirements and individual needs.
 - c. Amount of flexibility in the curriculum as a whole.
4. The development and use of a cumulative record system.
5. Interest and cooperation of the parents in the school.
6. Improvement of the testing and marking system of the school.

General principles for increasing the effectiveness of a guidance program. The following principles may act as guides in increasing the effectiveness of the guidance program:

1. The curriculum should be enriched by providing a wider variety of experiences. The greater the number, the more assurance that each pupil will find some in which he is interested or has an aptitude. These experiences should be drawn from and closely related to the community.
2. All pupils should be encouraged to engage in some form of work experience, provided either at school or in the community. This work should be under the joint supervision of the school officials and the employer.
3. All teachers should take an active part in the guidance program, even though the school is large enough to employ a full-time counselor.

4. Pupils should be given as much individual attention as possible, with special emphasis and consideration given to problem cases and maladjusted pupils. It follows that more time should be devoted to guidance, for this will require more than is usually devoted to this service.
5. Guidance should be started early in the pupils' lives. It should not be delayed until the senior year or near that time.
6. Close contact should be maintained with graduates, with constant revision of the curriculum and the guidance program based on findings from these contacts.
7. If possible, teachers' loads should be reduced or kept low so they can devote more time to guidance.
8. More facilities and materials should be secured to aid in this work.
9. Teachers should be given more training in guidance. This is best done through supervisory activities of the administration and through formal courses in colleges. Extension courses have been valuable, since they combine instruction with practice.

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I7

THE SECONDARY-SCHOOL TEACHER

When Mark Hopkins defined a school as a log with a teacher on one end and a pupil on the other, he implied that they were the most essential features of a school. Regardless of what else a school may have, all schools have these two features. Recently, a greater emphasis has been placed on the curriculum and on buildings and equipment. Certainly these are essential, for a school is more than a teacher and a pupil. At the same time, however, bricks and mortar do not make a school. All these features are essential—teachers, pupils, curriculum, buildings, and equipment—but a school can be no better than the teacher.

Formal education is designed to cause learning to proceed more rapidly and to be directed more toward definite goals than would be the case without a school. The success of the enterprise should be measured in terms of pupil growth toward these goals. If no learning has taken place, the school has failed. Granted that the teacher is only a part of the total environment of the school and that learning may take place in all the contacts pupils make in this environment, the teacher, nevertheless, maintains a most important position, for it is she who determines the goals, stimulates, guides, and directs the pupils, selects the learning activities, and is responsible for creating the environment of the school.

The present chapter is designed to acquaint those who are pursuing professional courses preparatory to becoming secondary-school teachers with the teaching profession and its possibilities.

DESCRIPTION OF SECONDARY-SCHOOL TEACHERS

In 1953, there were approximately 1,100,000 elementary and secondary-school teachers in the public schools of the United States, and over 300,000 were in secondary schools.¹ In elementary schools, the number of women exceeds the number of men, but the number of men increases to the senior high school, where the sexes are about equal. More men teach in larger city schools because the salaries there are larger.

Academic training. Contrasting secondary-school teachers of the United States with those of Europe, American teachers show less training than the latter. Those of Germany and France and most of those of England have training equivalent to the master's degree, and many hold the degree of doctor of philosophy. Although the majority of secondary-school teachers in the United States have four years or more of training beyond the high school, some, especially in the junior high schools, have not finished college. The average college education of all secondary-school teachers in the United States is 4.9 years.²

The preparation of secondary teachers in Germany is rigid and thorough with respect to scholarship. Before a teacher is appointed to a position, he must have had four years of advanced work in a university, admission to which is based on the completion of a secondary school of eight years. At various places along the line, he must have passed competitive examinations, and again, after finishing the university, he must pass a comprehensive oral and written examination on subject matter and methods. This is followed by at least two years in professional training and probationary teaching in an approved secondary school.

Secondary-school teachers of France who are intending to teach in schools for boys must attend school two years beyond graduation from the university, thus giving them a training comparable with those of Germany. In France, more emphasis is placed on academic than on professional training.

In England, the social status of secondary-school teachers is not so

¹ *National Education Association News*, May, 1953, National Education Association, Washington, D.C.

² T. M. Stinnett, "The Teacher and Professional Organizations," p. 21, National Education Association, Washington, D.C., 1953.

high as in Germany and France. The academic training is likewise not so high, although university training is essential. About half the teachers are women, many of whom were former elementary-school teachers.

There are many reasons why the teachers of France and Germany are more highly trained than those of the United States. The proportion of youth attending secondary schools in the United States is high compared with Europe, where fewer teachers are needed and a more careful selection can be made and higher standards maintained. The high-school population increased so rapidly in the United States from 1880 to 1930 that it was difficult to train teachers rapidly enough to fill the positions. The fact that American standards for certification are low is not a cause of poorly prepared teachers, but they are placed at a level where enough teachers will qualify. As salaries increase, attracting more persons to the profession, and as teacher-training institutions are established to meet the demands, standards can be elevated. The various states are determining the standards of academic and professional training through the requirements for certificates. A review of these requirements reveals that the majority of the states require four years of training beyond high school for all secondary-school teachers.

Teachers of the Latin grammar school. It is interesting to compare the secondary-school teachers of today with those of the Latin grammar school. The modern tendency is to select teachers who are sociable, friendly, and "human," for a teacher must work with people and teach as much by example as by precept. Contrasted with this type, the teachers of the Latin grammar school were dignified, strict taskmasters. Because of the close association of the school and the Church, many of the teachers were also ministers. Their most important qualification was soundness of doctrine, and for this reason schoolmasters usually had to be approved by the ministers. Scholastic requirements consisted of the ability to teach "the tongues." Their salaries varied from £20 to 60 a year before 1700 and rose to £80 to 100 after that date. Usually the teachers were provided with a house and garden and received part of their salary in kind. "Boarding around" was often a form of part payment.

The teachers were usually so partial to the classics that they were

reluctant to teach other subjects. It became necessary, however, for them to do so. If a town was so small it could not afford both an elementary school and a Latin grammar school, all the pupils attended one school, and while some would receive instruction in Latin, the others were taught by giving the teachers special fees for the extra work.

Certification. The majority of the states issue a secondary-school certificate which is valid in all high-school grades; some issue two separate certificates, one known as a junior-high-school certificate valid in grades 7 and 8, the other as a senior-high-school certificate valid in grades 9 through 12. State certificates indicate the specific subjects which one may teach. "Blanket" certificates covering the entire curriculum are not granted. Professional standards are being raised. Thirty-nine states require a minimum of the bachelor's degree for a beginning teacher, and five states require five years of college for all secondary teachers. In many city-school systems, five years of college work are required in order to qualify for a position.⁸

Teacher supply and demand. The maintenance of a balance between the number of new teachers needed to fill positions made vacant by retirements, death, and those leaving the profession and the number of those graduating from college has been a difficult problem. There is no control over the situation save the law of supply and demand, which causes fluctuation due to changes in the balance between teachers' salaries and those paid in other fields. The balance between supply and demand is also upset if there are national emergencies such as war or sharp increases in birth rates such as have occurred since 1940.

There was a shortage of teachers in the secondary schools during the period 1940 to 1945, when many teachers entered the armed forces or took positions other than teaching. During this same period, low enrollments in colleges and high birth rates resulted in a continued shortage of well-qualified teachers. Although the greatest shortage was in the elementary school owing to the fact that the increased birth rate was reflected there first, the lack of a sufficient number of adequately trained teachers is now being noted in secondary schools

⁸ W. Earl Armstrong and T. M. Stinnett, *Certification Requirements for School Personnel in the United States*, U.S. Office of Education Circular 290, 1951, p. 2.

and it is estimated that the shortage will become more acute as the increased number of children enter high school. It is estimated that this shortage will continue to or even beyond 1960.

The number of college graduates preparing for high-school positions exceeded the demands during the years 1950 to 1954.⁴ In 1952, there were 62,692 college graduates who completed programs preparing for high-school teaching. Many of these graduates did not teach, and many others taught in the elementary schools. There was an oversupply in some fields and an undersupply in others. Also, there was a local factor—shortage in one place and an oversupply in another. After about 1955-56, this situation will be changed, since increased enrollments arising from the high birth rates since 1940 will reach the high school and the need will grow sharply. During the period 1957 to 1960, high-school enrollments will continue to increase, and the number of high-school teachers needed will be more than the number being graduated unless college enrollments increase.⁵

One of the chief methods of securing teachers when there is a shortage of fully qualified teachers is that of issuing emergency permits. Those with emergency permits, on an average, have one year less training than regularly qualified teachers. Some have more college training than teachers with regular certificates but do not qualify for regular certificates because of various deficiencies. In some cases, teachers with valid certificates, specifically prepared for one division of the school system, are employed to teach in another, and those prepared to teach one group of subjects are employed to teach others in which they have little or no college preparation.

Other methods of solving the problem of teacher shortage have been those of increasing the size of classes and in other ways increasing teachers' loads; supervising students who are taking correspondence courses at other institutions; and, in some cases, having half-day sessions.

Although progress is being made in reducing the number of teachers with substandard certificates, this is still a problem. One reason is the fact that as fast as the number is reduced, the states increase the re-

⁴ Ray C. Maul, Implications of the 1950 National Study of Teacher Supply and Demand, *Journal of Teacher Education*, June, 1950, pp. 95-102.

⁵ News and Trends, *National Education Association Journal*, 41 (May, 1952), p. 259.

quirements for the certificate. In 1940, 1 teacher in 340 had lower educational qualifications than those prescribed by law; in 1952-53, 1 in 16 held a substandard certificate.⁶

Marital status. The scarcity of teachers during the Second World War was a great factor in removing the discrimination against married women teachers, which had been common during the previous decade, for often they were the only ones who could be employed to fill vacancies. Many were former teachers who had left the profession and returned to help during the emergency, or who desired to teach but had been unable to secure a position because of policies against married women teachers. The large number of marriages during the war and the years immediately following greatly reduced the number of single women available, and it has been necessary to employ married women in order to fill positions. This has not in any manner decreased the quality of instruction, for marital status seems to be an irrelevant factor in determining teaching efficiency and has become an irrelevant factor in employing teachers.

Social life. Although it is not a universal practice, there are many communities in which regulations are placed on the teacher's social life. The persons with whom she associates, the friends she makes, and the persons with whom she "keeps company" or "makes dates" or whom she "goes with" are often regulated by popular opinion. In small towns, especially, the patrons are concerned with matters of dress, time of retiring, and participation in community activities. In many places, teachers are expected to take an active part in church work and of course contribute to all community enterprises. These restrictions are rapidly being removed, and teachers are controlling their own conduct.

Teachers' salaries. Teachers' salaries vary to such an extent that it is difficult to describe them save by means of many tables of salary schedules, which are constantly changing. Salaries vary between states, between cities in the same state, between rural and urban centers; and they vary with the position, the certificate held, and the length of service in a school.

In general, salaries are higher in urban than in rural areas; salaries increase with positions from elementary through secondary to ad-

⁶ Frank W. Hubbard, *Outlook for Public Schools in 1953 Is Less Gloomy*, *National Education Association News*, 6 (Dec. 12, 1952), pp. 1, 3.

ministrative positions unless there is a single salary schedule, and most salary schedules give increments for each year of tenure, with beginning salaries based on the certificate or degree of the teacher. One of the strongest incentives to secure advanced degrees, master's and doctor's, is the increased salaries based on those degrees compared with those based on a bachelor's degree or on less than four years of college work.

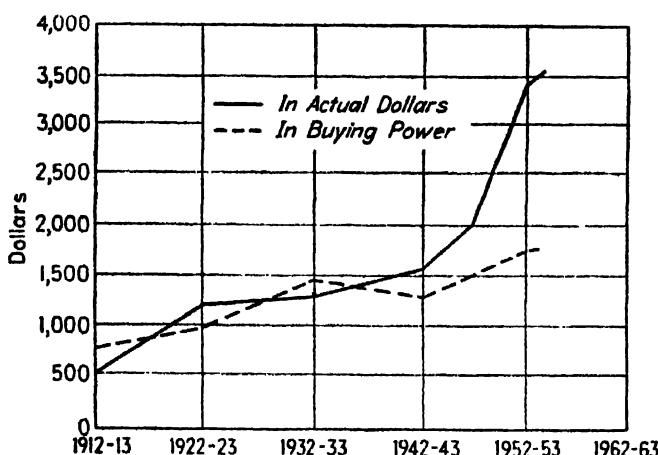


FIG. 22. Average annual salaries of public-school teachers from 1912 to 1954. These include all instructional personnel. [From "Schools for Our Times," National Education Association, Washington, D.C., 1951, and *National Education Association News*, 8 (Mar. 26, 1954), p. 3.]

The average salary of teachers has shown a steady increase in the last four decades. The average annual salary for all public-school teachers for the school year 1953-54 was \$3,610 (Fig. 22), which was an increase of about 5 per cent over the previous year. In the same figure, the buying power of the dollar is also shown based on the 1935 to 1939 dollar. When this factor is considered, teachers' salaries are still far from being adequate and the apparent increase is not so great as the actual one. The gains in salaries have been due to insistent public opinion to lift salaries to reasonable levels. Through the mediums of the local newspapers, radios, and talks to civic clubs and by other means, the public has been moved to action; and they have voted increased taxes, and state legislatures have increased state appropriations to local districts. Much of the work has been done through organized efforts of the National Education Association and the various state education associations. At the same time that efforts were

being made to influence public opinion to increase salaries, many teachers left the profession for other types of employment which paid more, and many teachers migrated within the profession to higher-paying positions. Observations of this rapid turnover were good arguments for increased salaries.

Teacher welfare provisions. Teacher welfare provisions are constantly being improved. All states now have social-security, pension, or joint contributory teacher-retirement systems. Thirty states now have tenure laws or continuing contract laws that apply to at least some teachers in each of the states. Thirty-two states, Alaska, and Hawaii have minimum salary schedules, and practically all cities over 30,000 population have adopted definite schedules. The trend in schedules is toward the single type, with remuneration based upon the factors of preparation and experience, without discrimination because of race, sex, or levels of teaching. Sick-leave provisions are mentioned in the statutes of 23 states and Hawaii, Alaska, and Puerto Rico.⁷

Tenure and teacher turnover. Teachers cannot hope to be highly efficient and render their best services to the school and the community if they change their positions too frequently. Likewise, the school suffers in efficiency when too many teachers are new to their positions each year. It takes some time for a teacher to become well acquainted with his work, his pupils, and the entire school. If he changes positions soon, he must again learn to adjust himself to a new situation. Long-time planning in curriculum construction, improved methods of teaching, and an efficient program are not possible when turnover is great.

There are practically no accurate figures on teacher turnover on the secondary level for the country as a whole. From what data are available, the following observations may be drawn:

1. Teacher turnover is greater than it should be.
2. Turnover is greater in rural than in urban centers, for in the former salaries are lowest and there are no good tenure laws.
3. The gross turnover has been estimated to be somewhere between 25 and 50 per cent as measured by the number of new teachers each year and the percentage of teachers new to their positions. The range is from 2 or 3 per cent in some cities to 100 per cent in some years in some rural schools.

⁷ Stinnett, *op. cit.*, p. 17.

Some of the chief causes of teacher turnover are:

1. *Lack of Adequate Tenure Laws.* The annual contract fosters an increased turnover, for often school boards fail to reemploy teachers merely to satisfy their own whims or discharge them merely to exercise their authority.

2. *Withdrawal from the Profession.* The main reasons for this are death, illness, retirement, marriage, or a desire to enter other types of work.

3. *Promotions.* To a great extent, beginning teachers are forced to secure their first positions in rural schools and after gaining a few years' experience transfer to urban schools.

4. *Voluntary Change of Position.* Many teachers desire to change positions every few years, either because of a roving disposition or dissatisfaction with their present situation.

Tenure laws giving permanent tenure after a probationary period mean that teachers may hold their positions without the necessity of annual applications, but they do not assure permanent tenure. The school board must give notice by a certain date if a teacher's services are to be discontinued.

The arguments for tenure provisions are:

1. To prevent political control of schools and teaching positions.
2. To permit and encourage teachers to devote themselves to the practice of their profession without fear or favor.
3. To encourage competent and public-spirited teachers to remain in the schools.
4. To discourage school management based on fear and intimidation.
5. To prevent the discharge of teachers for political, religious, personal, or other unjust reasons.
6. To protect teachers in their efforts to secure well-financed and adequate education for the children in their charge.

The chief disadvantage of permanent tenure is that of getting a poor teacher and being unable to discharge her. The only methods of removing this objection are to proffer permanent tenure only after a probationary period, to exercise care and judgment in employing new teachers, and to require training in service to ensure professional advancement.⁸

⁸ See "Teacher Tenure," Discussion Pamphlet No. 1, Department of Classroom Teachers, National Education Association, 1950.

New pattern in teacher education. For some time, there has been considerable evidence that four years are not sufficient time in which to educate teachers for the secondary schools. Increased responsibilities placed on the teachers, new developments in the field of education, and newer principles from the fields of psychology and philosophy have made it increasingly difficult for teacher-educating institutions to train teachers adequately in four years. Whether the increased year of schooling, if added, should be devoted to further courses in education or the professional education of teachers or should be aimed at further specialization or general education has been an issue for some time. Since further professional education is received on the graduate level and since there has been a feeling for some time that the general cultural background of teachers needs further development, several new plans are in progress, initiated primarily for the purpose of studying teacher education.

Although there is little actual evidence as to the relative merit or effectiveness of one plan of teacher education as opposed to another, those in charge of various programs tend to be convinced that their plans are superior to others. During the last half century, we have developed a variety of practices, but in general they consist of a program involving a substantial amount of work in general education, specialized work in two or more teaching fields, and courses in education. The courses in education make up one-eighth to one-fifth of the total required for the degree, and they may be scattered through the entire program or concentrated in one semester. Clearly, there is no one best plan, but despite this there is a tendency to resist changes.

In order to assist in study and experimentation with various plans, the Fund for the Advancement of Education has recently made grants to various institutions and states to enable them to try out programs of teacher education. One of these on a state-wide basis is in operation in Arkansas, with 15 colleges cooperating in the experiment. Students participating in the experimental plans pursue a four-year course of undergraduate work consisting of general education and appropriate specialization in teaching fields offered in the high school. The content of the four-year curriculum is determined by each college. No courses in education are included in the undergraduate program.

The work in education is included in the fifth year, which consists of observation in a public school, intensive study of methods, cur-

riculum, history and philosophy of education, and child development, and a large amount of actual participation in teaching under the immediate supervision of a cooperating teacher in a public school.

This program is in the beginning stages, and the details of operation will no doubt be modified as it develops. Similar experimental programs are under way at Cornell University, the University of Louisville, and Harvard University.

TEACHING AS A PROFESSION

In America, teaching has emerged from a part-time job to a profession. From Colonial times to the twentieth century, the majority of teachers had to supplement their incomes by other work. Low salaries were only one of the drawbacks. Teachers worked only a few months out of each year; there were no state certification laws, no legal status, no tenure, little professional literature, and few organizations. The first state normal school was established by Horace Mann at Lexington, Mass., in 1839. Before this, and for some time afterward, the academies trained elementary-school teachers, while secondary-school teachers received their academic training in colleges and universities. The majority of the latter had no professional training until the twentieth century, when colleges and universities established teacher-training departments, which emerged in many cases into separate colleges offering four-year courses preparing persons for both elementary- and secondary-school work.

Teaching has both the elements of a profession and of a skilled trade. The factors which characterize it as a profession are as follows:

1. *Legal Status.* Teachers are now certificated by the states, and all now work under contracts which have been upheld by law.
2. *Professional Organizations.* The chief organizations are the N.E.A. and its affiliated organizations and the state educational associations. Membership is increasing rapidly.
3. *Professional Publications.* The number of professional publications in periodical and book form is legion. There are official publications for every type of educational work.
4. *Code of Ethics.* The N.E.A. has adopted a code of ethics, and the various state organizations have either adopted the same one or prepared similar ones.

5. *Professional Training.* Separate teacher-training institutions, colleges of education, and departments of education are found in all states of the United States. One may secure the bachelor's, master's, and doctor's degree in almost any phase of education, or he may pursue a liberal-arts course with a major in education.

6. *High Standards of Training.* The amount of training required in a given field is one of the chief criteria for determining its professional status. If one considers secondary teachers and those in higher institutions, the period of required training gives this phase of teaching a high rank. Elementary teachers do not rank so high.

7. *Social Standing.* With few exceptions, teachers enjoy a social position in the community on a par with that of other professional and business groups.

8. *Intellectual Activities.* The teaching profession involves activities which are essentially intellectual.

9. *Continuous Growth.* It requires continuous in-service growth.

10. *Service.* It exalts service above personal gain.⁹

The factors which lower the professional status of teaching are:

1. Lower salaries than other professions.
2. Shorter period of training than other professions.
3. Lack of professional solidarity.
4. Low period of tenure.
5. High degree of turnover.
6. The use of teaching by many as a steppingstone to other professions.
7. Teachers engaging in unethical practices, such as breaking contracts, underbidding, and abusing confidences concerning pupils.

Opportunity for advancement. Many students of education believe that there is not so much opportunity for professional advancement in education as in other fields of work merely because they are not aware of the various types of activities in education. The best-known and most frequent types of positions, ranked in order of professional and economic status, are elementary-school teacher, junior-high-school teacher, senior-high-school teacher, elementary principal, high-school principal, and supervisor and superintendent. These represent the types

⁹ "The Yardstick of a Profession," p. 8, Institute of Professional and Public Relations, Division of Field Service of the National Education Association, Washington, D.C., 1948.

of positions occupied by the majority of teachers, but they represent only a small number of the types of positions available.

There are many types of positions in education in addition to classroom teaching. Some of them are publicity agents, purchasing agents, architects, directors of educational research, school psychologists, statisticians, nurses, coaches, dentists, librarians, visiting teachers, directors of various courses of study, and supervisors of testing, health, and special services.

Many teachers leave the profession before they have had an opportunity to learn of its opportunities or to get an increase in salary. In any profession, beginning salaries are not so large as they are after some years of service. The highest salaries are paid in administrative positions, and men tend to secure them; but many elementary-school principals are women, and they have an equal chance with men in special supervisory work. Any student who wishes to follow educational work as a career will find ample opportunity for advancement.

Opportunity for service. There is as much opportunity to render service in the teaching field as in any profession, or even more. Teaching is unique in that it provides an opportunity to have daily contacts with youth. This makes it possible for teachers to change the conduct of individuals, groups, an entire community, and, taken collectively, the entire nation. This has been well illustrated in other countries, where the schools have been used by political parties as instruments for indoctrinating youth with their principles, which has caused a change in the methods of thinking and acting in the entire country. The fact that schools are such a great force places a great responsibility on teachers. A realization of this fact by the general public accounts for their demanding such high standards of conduct for teachers and for the passage of laws preventing teachers from using the classroom to teach any principles or doctrines which are un-American.

Teachers are also citizens in the community and, as such, teach by example. They have an opportunity also to engage in community activities and be leaders of youth or of adults. Because their work is with youth, they are constantly challenged to keep young and professionally alive.

In addition to opportunities for service, teaching is attractive because of the social position and prestige accorded by the community.

Although there are exceptions due mainly to individual teachers themselves, the position of teachers is high. The hours of classroom work are not too long to prevent teachers from engaging in activities of their own choosing, as travel, reading, writing, social-civic activities, and hobbies. Tenure laws are rapidly being enacted to provide security, and retirement plans are being adopted to assure teachers of an income after they cease active service.

Anyone will like teaching if he is a leader in his own school group; likes people, has many friends, and enjoys social contacts; enjoys working with people younger than himself; likes to explain things to others; likes to read and to express himself; likes to follow a profession that will give opportunities to improve social conditions; and likes others to turn to him for leadership and advice.

THE NATIONAL EDUCATION ASSOCIATION

The N.E.A. enrolled 510,790 teachers during the school year 1953-54.¹⁰ Although this represents a little less than half the teachers in the United States, it does represent the highest membership of the N.E.A. in any one year. The organization has been growing steadily since its beginning. Membership in state education associations is higher.

The N.E.A. is an all-inclusive professional organization of teachers which was started in 1857. As it grew, it expanded to include every branch of educational service. It now has 29 departments, such as departments for administrators, classroom teachers, counselors, supervisors, secondary principals, elementary principals, college teachers, and sections for special-interest groups, such as teachers of English, social studies, mathematics, physical education, art, music, etc.

Characteristics of the N.E.A. The N.E.A. is unlike many other professional organizations; yet it has elements similar to others. Its major characteristics are:

1. It is the teachers themselves working together to advance the interests of the teaching profession, and to promote the welfare of all people, especially that of children.
2. It is a voluntary organization. There is no requirement for membership, save the payment of dues, nor is there any compulsion for teachers to become members.

¹⁰ *National Education Association News*, 8 (Jan. 22, 1944), p. 1.

3. It is an independent organization, although it cooperates with others which advance education, even as the Adult Education Association, the American Legion, the American Library Association, and the National Congress of Parents and Teachers.
4. It is an inclusive organization. It has united many educational organizations which have become departments or sections of the N.E.A.
5. It is democratic. Thousands of teachers serve as local and state officers. All policies are made at conventions by teachers who are sent as delegates and who are selected by local associations.

N.E.A. publications and services. The N.E.A. publications represent one of the major services to teachers. There are more than 1,200 different publications available from the N.E.A., dealing with all phases of education. Many of these are pamphlets and bulletins which are distributed to teachers at the cost of publication and distribution. In addition, there is much free material sent to all members in the form of leaflets and newsletters which are aids to teachers in keeping up in education and in promoting better public and professional relationships. All members receive the *National Education Association Journal*, which is published each month, and the *National Education Association News*.

In addition to these publications, the N.E.A. maintains a research division which publishes its findings in the *Research Bulletin of the National Education Association*. Subjects covered are those pertaining to teacher welfare and professional status, teacher supply and demand, salaries, salary schedules, teachers' contracts, state laws pertaining to certificates, and similar studies. In addition, the N.E.A. Research Division answers more than 10,000 letters a year requesting information about education.

The N.E.A. furnishes a medium through which the members may exchange ideas and information about their common tasks; it aids in the in-service growth of teachers; it has helped create a favorable national climate of public opinion for education by keeping a stream of material flowing to newspapers, magazines, and radio outlets; it is one of the chief defenders of the teaching profession, especially through committees, as those on tenure and academic freedom and the National Commission for the Defense of Democracy; professional standards are studied and promoted through the National Commission on Teacher Education and Professional Standards; the organiza-

tion works for teacher welfare through research and legislation by working in the areas of salaries, tenure, retirement, sick leave, and the improvement of general working conditions; and it aids in curriculum planning and better relations with schools of other countries.¹¹

Future Teachers of America. In order that the teaching profession might attract more students and identify those interested in becoming teachers and start their professional growth earlier, an organization sponsored by the N.E.A. was started in 1937. In practice, clubs, composed of those students who are interested in teaching as a profession and wish to explore it further, are organized in high schools; and chapters in colleges, composed of those who are pursuing courses leading to the requirements for a teaching certificate. In these clubs and chapters, actual experiences in participating in professional organizations are provided.

In 1953-54 there were 1,200 active high-school clubs and 510 college chapters with a membership totaling 24,213 and 23,117, respectively. Many of the states are now organized on the state level, with working state organizations and future teacher conventions held annually. Members in colleges pay a \$2 to \$3 membership fee, depending on the state, which entitles them to all privileges of membership in the N.E.A. and their state organization save that of voting. They receive the *National Education Association Journal* and their state education journal.

What the N.E.A. has helped to accomplish. The accomplishments of the N.E.A. are too many to enumerate in a brief space. A few should be mentioned: ¹²

1. General public acceptance of free public education.
2. General public acceptance of teaching as a profession.
3. Development of a body of professional literature.
4. General public acceptance of the idea of equalization of educational opportunities.
5. Development of professional salary scheduling.
6. A teacher-retirement system in each state.
7. Tenure or continuing-contract laws.

¹¹ See annual editions of the "National Education Association Handbook," National Education Association, Washington, D.C.

¹² See Stinnett, *op. cit.*, pp. 107-109, and annual editions of "National Education Association Handbook," National Education Association, Washington, D.C.

8. Minimum-salaries schedules.
9. Functioning professional organizations in every state and territory.
10. Centralization of teacher certification in state departments of education.
11. General acceptance of the principle of a minimum professional preparation of four years of college for initial service for all teachers.
12. General adoption of professional programs of teacher education by teacher-education institutions.
13. The development of continuous professional-growth programs which affect practically all teachers of the nation.

TEACHER FREEDOM

Next to ministers, the general public has set higher standards of conduct for teachers than for any other professional group and for those engaged in public service. Evidently, parents want their children to associate during school hours with persons whose personal conduct is elevated above the standards common to the homes from which the children come. Although the amount of freedom permitted teachers in their private lives has been greatly increased, there is still a tendency for communities to regulate and control the conduct of teachers. What teachers do in the community is a greater factor in unseating them than what they do in the classroom.

A few typical examples will illustrate the attitude of the public toward teachers:

1. *Personal Habits and Amusements.*¹⁸ Before the First World War, many teachers of the Middle West and South could not attend the theater. This objection has almost entirely been removed. Dancing and playing cards are still forbidden in many places, and gambling, drinking, and swearing are not possible for most teachers. In many places, smoking is not permitted, but it is being tolerated even for women teachers in some cities. In smaller communities, women may not smoke even when away from the school.

2. *Immoral Conduct.* Immoral conduct, although it is not rigidly defined, is always legitimate grounds for dismissing teachers and is upheld by courts in all tenure laws. Where sex morality is involved, gossip is usually a sufficient cause for dismissal.

¹⁸ See Howard K. Beale, "Are American Teachers Free?" pp. 374-375, Charles Scribner's Sons, New York, 1936.

3. Married Women. Generally, in cases involving the dismissal of a teacher solely on the grounds that she was married, "courts have sustained the philosophy of modern education which tends toward liberation of personality."¹⁴ In other words, they have upheld the teachers' right to marry. Nevertheless, there has been much discrimination against married women. In 1932, a survey of 1,500 city school systems with populations of 2,500 or over revealed that 76.6 per cent did not employ married women as new teachers, and 61.7 per cent required teachers to resign at once or at the end of the school year if they married in service.¹⁵

The scarcity of teachers during the Second World War was a great factor in removing the discrimination against married women teachers, for often they were the only ones who could be employed to fill vacancies. Many were former teachers who had left the profession and returned either to help during the emergency or who desired to teach but had been unable to secure a position because of policies against married women teachers. Whether the trend will be toward a preference for single women remains to be seen. The large number of marriages during the war and the years immediately following greatly reduced the number of single women available, and it has been necessary to employ married women in order to fill positions. This has not in any manner decreased the quality of instruction, for marital status seems to be an irrelevant factor in determining teacher efficiency.

4. Social Life. Although it is not a universal practice, there are many communities in which regulations are placed on the teacher's social life. The persons with whom she associates, the friends she makes, and the persons with whom she "keeps company" or "makes dates" or whom she "goes with" either are regulated by popular opinion or are explicit in the contract itself. In small towns, especially, the patrons are concerned with matters of dress, time of retiring, and the matter of participation in community activities. In many places, teachers are expected to take an active part in church work and of course contribute to all community enterprises. Many contracts even

¹⁴ Ward W. Keeseker, *The Legal Status of Married Women Teachers, U.S. Office of Education Pamphlet 47*, 1934, p. 2.

¹⁵ *Research Bulletin of the National Education Association*, 10 (No. 1, January, 1932), p. 19.

include provisions concerning the number of week ends the teacher may spend out of town, while school-board members often dictate where teachers may board.¹⁶

5. *Political Activity.* Teachers must teach citizenship, but they are often not permitted to take an active part in politics by campaigning for a political party or even to be outspoken in their beliefs.

6. *Labor Organizations.* Labor activity and attempts to join labor unions in order to protect themselves are frowned upon for teachers.

7. *Academic Freedom.* Many attempts at curbing academic freedom in the classroom grew out of ideas about religion. Many parents who believed that there was a conflict between science and religion sought legislation to prevent certain principles or views from being taught. The states of Florida, Mississippi, Arkansas, Tennessee, North Carolina, and Louisiana have laws or resolutions designed to prohibit or discourage the teaching of evolution or anything contrary to the Bible. However, these are not rigidly enforced, and, in general, teachers may express views and opinions as long as they exercise reasonable caution and restraint.

8. *Loyalty Oaths.* Legislation requiring that teachers take oaths of loyalty has been enacted in the states of Arizona, Georgia, Massachusetts, Michigan, New Jersey, Vermont, and others. These oaths are usually regarded as an infringement upon academic freedom and constitute class legislation. If any teacher is inclined to teach any principles contrary to the ideals of democracy, it is doubtful that loyalty oaths would prevent it.

The profession of teaching is enjoying more personal freedom now than at any time in its history. Gradually, these restrictions are being removed, and teachers are being permitted to lead normal lives. The legislature of South Carolina gave every teacher freedom to choose her place of residence and boarding and forbade trustees to interfere in this right. Kentucky, Nevada, and West Virginia have passed legislation making it unlawful for school boards to bestow patronage on friends or relatives in employing teachers, and Pennsylvania forbids teachers to bestow gifts upon board members.¹⁷ There is now legis-

¹⁶ Beale, *op. cit.*, pp. 388-390.

¹⁷ A Review of Educational Legislation, 1935 and 1936, Biennial Survey of Education, 1934-36, U.S. Office of Education Bulletin 2, 1937, pp. 23-24.

lation in 11 states concerning retirement systems. Until petty interference in the private lives of teachers is removed, many persons, especially men, will not be attracted to education. There is a difference between maintaining high standards for teachers and controlling their conduct in the community. Teachers as a whole have demonstrated their ability to control their own conduct in such a manner that there is no reflection on them personally or on the school.

PROFESSIONAL GROWTH IN SERVICE

There are two periods when teachers are trained: preservice training in colleges and universities and in-service training, or what is often referred to as "keeping up." Too often, the latter is neglected. When a degree is secured, one is inclined to undergo a rest period. Education is one of the most rapidly growing and changing professions, and unless a teacher makes a deliberate and constant effort to keep abreast of the times, she will soon find herself dead professionally. Furthermore, professional advancement is not likely to proceed more rapidly than the degree to which one improves in service.

The usual methods employed by teachers for in-service training and improvement are:

1. *Professional Reading.* If the school does not have a professional library, the teacher should subscribe to a few professional magazines, purchase a few books each year, and exchange with or borrow from fellow teachers.

2. *Attending Professional Meetings.* In nearly all parts of the United States, teachers are organizing themselves into professional study groups. Often, outside speakers are invited to address these groups, or current topics and problems are discussed.

3. *Home-study Courses.* Although it is better to pursue a course of study in residence, if this is not possible one should take advantage of the correspondence or extension courses offered by a large number of teacher-training schools.

4. *Summer-school Attendance.* Summer-school enrollments are increasing, mainly by teachers pursuing courses for either the bachelor's or the master's degree. The increased requirements, especially for principals and superintendents of accredited high schools, is partly

responsible for this increase. Requirements for certificates are increasing, and the wise teacher will not postpone preparing herself for the increasing requirements.

5. *Travel.* Tours for teachers during vacations are becoming popular. Thousands travel in small groups by car during the summer. Many prefer to attend summer school at distantly located universities in order that study and travel may be combined.

6. *Observation and Supervision.* Teachers should never miss an opportunity to observe the work of superior teachers and try to emulate their techniques. One of the duties of principals and superintendents is that of improving teachers in service, and it is ethical for teachers to request help from them. Likewise, special supervisors are often available for helping teachers improve themselves.

The teacher and the administration of the school. Unless a teacher is so unfortunate as to have an autocratic or dogmatic principal or superintendent, she will find that most schools are democratic in their administration. She will be charged with responsibility and permitted to exercise her own ingenuity and initiative in performing her duties. Sometimes teachers take advantage of a democratic situation and evade certain responsibilities. The following are a few of the general duties and responsibilities of typical secondary-school teachers. These, of course, will vary in local situations.

1. *Teaching Classes.* The number assigned to a teacher will vary from four to eight a day. Beginning teachers, and those in small rural schools, usually have the largest teaching loads in terms of the number of classes daily and the number of preparations. Class sizes are likely to be smaller in rural than in urban centers.

2. *Keeping Records and Reports.* Basic records for a classroom teacher are those pertaining to her immediate classes, such as enrollment, attendance, marks, and report cards. Others may be assigned to her.

3. *Engaging in Extra Activities.* Teachers may be asked to sponsor school clubs, coach athletic or literary teams and dramatics, take charge of study halls or the library, serve on committees, help in curriculum construction and textbook selection, take an active part in parent-teacher associations, and plan and direct assembly programs.

4. *Attending Teachers' Meetings.* Teachers' meetings may be periodical or on call and usually occur once a month. Teachers are usually

expected to attend and often to take part by giving committee reports or book reviews or discussing some topic.

5. *Maintaining Relationships with Parents.* Parents are usually interested in the schoolwork of their children and expect teachers to confer with them from time to time concerning their progress. Many principals require teachers to be in their classrooms an hour before parent-teacher meetings are scheduled, to confer with patrons, or to visit parents in their homes at least once during the school year.

6. *Helping in Guidance.* Although many schools have guidance counselors who devote full time to that work, all teachers in a school system should take part in a guidance program. Types of activities required in guidance are making observations of pupils, keeping guidance records, interviewing and counseling pupils, and becoming more intimately acquainted with each pupil and his environment.

These six major divisions of a teacher's work are directed and supervised by the administrators and personnel officers of the school. Usually these are the superintendent of the system and the principal of the particular high school. A high degree of cooperation between the teacher and the administrative staff is essential to the success of the school.

PROFESSIONAL ETHICS

In 1929 the N.E.A. approved and recommended a professional code of ethics which was revised in 1941. The following is a condensed statement of the code. It will acquaint the beginning teacher with the main provisions.

ETHICS FOR TEACHERS

A Condensed Statement of the Code of the National Education Association

The teacher should be courteous, just, and professional in all relationships.

Desirable ethical standards require cordial relations between teacher and pupil, home and school.

The conduct of the teacher should conform to the accepted patterns of behavior of the most wholesome members of the community.

The teacher should strive to improve educational practice through study, travel, and experimentation.

Unfavorable criticism of associates should be avoided except when made to proper officials.

Testimonials regarding the teacher should be truthful and confidential. Membership and active participation in local, state, and national professional associations are expected.

The teacher should avoid indorsement of all educational materials for personal gain.

Great care should be taken by the teacher to avoid interference between other teachers and pupils.

Fair salary schedules should be sought and when established carefully upheld by all professionals.

No teacher should knowingly underbid a rival for a position.

No teacher should accept compensation for helping another teacher to get a position or a promotion.

Honorable contracts when signed should be respected by both parties and dissolved only by mutual consent.

Official business should be transacted only through properly designated officials.

The responsibility for reporting all matters harmful to the welfare of the school rests upon each teacher.

Professional growth should be stimulated through suitable recognition and promotion within the ranks.

Unethical practices should be reported to local, state, or national commissions on ethics.

The term "teacher" as used here includes all persons directly engaged in educational work.

Principles concerning secondary-school teachers. The following principles concerning secondary-school teachers may be derived from the previous discussion:

1. The positions of secondary-school teachers, supervisors, counselors, and principals should become more professional. These positions should not be considered as steppingstones to other positions in education.

2. Teachers' salaries should be congruous with the requirements, the responsibility, and the importance of the position. They should be made more comparable with those of other professional groups.

3. Principles of a good salary schedule:

- a. Beginning salaries should be high enough to attract well-prepared, promising young people.

- b. Top salaries should be high enough to retain highly competent men and women.

- c. Salary increases should be sufficient to provide incentives to continuing improvement.

- d. Annual salary increments should progress in a regular manner toward the maximum salary.
- e. There should be equity of treatment of all classroom teachers of like qualifications.
- f. Salary increments should be high enough and frequent enough to act as an incentive for teachers to remain in the profession and in the position.
- g. Salaries should be adjusted from time to time as costs of living vary.¹⁸
- 4. All states should have adequate tenure and teacher-retirement laws.
- 5. The position of teaching should be free from the influence of political and pressure groups.
- 6. In-service training programs should be developed to help the teacher continue to improve and keep informed professionally.
- 7. All teachers should be members of and take an active part in professional organizations and strive to develop better professional attitudes.
- 8. All teachers should be acquainted with and abide by the code of ethics of the N.E.A.
- 9. Teachers can control their own conduct; therefore, greater freedom in community and personal activities should be permitted.

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I8

SCHOOL AND COMMUNITY RELATIONSHIPS

Increasingly, parents and citizens are taking a greater interest in their schools; and they should, for the public schools belong to them. They have shown this interest by visiting the schools more frequently, voting more taxes for expanding and improving the program, working on PTA and citizens' committees, and in other ways. Sometimes this interest takes the form of criticism which is interpreted as opposition to the program, while, actually, it may be a result of misunderstandings or of a genuine desire to improve the school program.

Schools are in a constant process of change. They have gone from small, simple organizations to complex ones which cannot be understood by laymen unless the program is interpreted to them. Interpreting the schools to the public, cooperating with parents and citizens in building a public-school system, making policies, and working toward the same goals in educating youth are all included under the term public relations.

THE PUBLIC-RELATIONS PROGRAM

Public schools must be reappraised as frequently as they are changed; for, in the process, the best traditions of the past must be maintained; the same general aims must be kept; and they must always remain democratic and strive to meet the needs of all youth. Educators cannot do these things alone. They are charged with definite responsibility, but since schools are a part of, rather than apart from, the communities, parents and school personnel must appraise the schools and work together in modifying and improving them in the light of their evaluations. Parents may recognize a weakness in a school system but

not be able to tell what causes it or how to improve it. This is the educator's work. Thus the need for cooperation.

Need for a public-relations program. Public-relations work should be the result of a planned program rather than a series of irregular, poorly organized, and uncoordinated efforts. A planned program is needed to unite individual efforts so that they will be effective. It is needed so that activities will be continuous rather than erratic, and systematic rather than haphazard, and so that efforts will be cooperative, rather than antagonistic. Interest in education will die unless it is stimulated; disinterested persons will not become active unless they are aroused; enemies of public education will not become friends unless an effort is made to gain their friendship; critics of the schools will attack them unjustly unless they are informed. Legislatures will never know what to believe if they are told one thing by one group and another by another group; they will become confused if educators fight among themselves; and they will fail to adopt needed school legislation if they are convinced the schools are not serving the interests and needs of all youth.

There is a need and an obligation to give citizens ample information about their schools. They need a leader and information when it is time to act to improve or modify schools, whether it be in respect to physical equipment, the methods of instruction, or the practices in the system.

The purposes of the public-relations program. As with any other program, public relations should be planned and organized with definite purposes which are known to all. There have been many statements of the aims, purposes, and functions of a public-relations program. The following are a number of purposes which are suggestive and which may be used as a guide in formulating purposes for a local program:

1. To aid in building favorable public opinion toward the continuous support of the school.
2. To keep the citizens and the teachers conscious of the fact that the schools need to be constantly reappraised.
3. To help coordinate all educational agencies so they will work toward the same educational objectives.
4. To arouse the interest and the will to improve schools on the basis of accurate information.

5. To provide an opportunity for all to cooperate in formulating the policies of the school.
6. To win friends for the schools and keep them.
7. To protect the school against unjust attacks.
8. To help all realize the value of public schools in a democracy.
9. To interpret the educational program to laymen.
10. To supply the public with information in which they are interested.

The characteristics of a good public-relations program. In addition to the public-relations program being planned, based on definite aims and purposes, there are several other characteristics which may be of value in building a new program or appraising one in existence. A good public-relations program should be positive in that it is directed toward specific goals; honest in imparting educational information; sensitive to the opinions and feelings of all concerned; complete in the mediums employed and the phases of the school system included; and continuous rather than erratic.¹

The program should be planned to reach all persons and groups who are interested and concerned with public education: the alumni of the school, prospective students, the local and the state public, professional educators, those working within the school, and all those who visit the school. Contacting these groups has been referred to as the keys to public relations.²

Organization for public relations. If public-relations activities are to be of maximum effectiveness, are to be systematic rather than spasmodic, a well-planned program is needed operating in the framework of an efficient, but not complex, organization. The organization should be planned and the activities coordinated with parents and teachers working together. The program is not for or by one group only; it is not something teachers do for the public, or the public for the teachers, but it is a series of organized and coordinated activities and efforts to solve educational problems and build a better school system. Thus the school program becomes the public-relations program. If this were not true, then the public-relations program would become an end in

¹ "Public Relations for America's Schools," pp. 18ff., Twenty-eighth Yearbook of the American Association of School Administrators, National Education Association, Washington, D.C., 1950.

² W. W. Ludeman, *Eight Keys to Public Relations School Executive* (October, 1950), p. 63.

itself rather than an instrument for building and maintaining a public-school system.

In very small schools, the organization is usually informal. The principal of the school or the district superintendent takes the lead in promoting public relations. Teachers and parents take part as various situations arise. In larger schools, a public-relations director is often employed who works with the teachers and parents in organizing and coordinating their efforts. A director also assures that there will be a continuous program.

In the last few years, a new approach has been made through citizens' committees. These groups are sponsored by a national citizens' commission which has been active in promoting the idea.

National Citizens Commission for the Public Schools. The commission is a nonprofit corporation for the improvement of public schools. Its formation was announced in May, 1949. Its members are American citizens who are not professionally identified with education, religion, or politics, who reflect many kinds of experiences, serve as individuals, and do not represent organizations or groups. The commission has received financial support from the Carnegie Corporation, the General Education Board, and the New York Community Trust.

The commission has set two goals for itself:

1. To help Americans realize how important our public schools are to our expanding democracy.
2. To arouse in each community the will to improve our public schools.

To accomplish these goals, it is attempting to reach every community in the nation, for the commission believes that the schools should remain in the hands of local citizens. It uses various mediums to reach the people, such as the radio, newspapers, pamphlets, and representatives who visit communities, and, through these channels, encourages local groups to organize "citizens' committees" pledged to work for better schools in their communities. At present, well over 1,000 such committees are in operation.

To be successful these committees must truly represent the entire community. Its membership must be a cross section of geographical, religious, economic, social, and political strata. They must make every effort to work cooperatively with school authorities but preserve independence of action and thought, and they must start with fact find-

ing to make certain these actions are based on an objective evaluation of the problems.

Commission members have carried the idea to over 40 states. They encourage organizations, tell how others have operated, supply literature to help organize, and maintain a consultant service. They have promoted workshops and received aid from civic clubs and professional educational organizations in promoting the idea.

Those who have citizens' committees in their communities value them highly. It is alleged that these groups aid in securing legislation, in building programs, in curriculum planning, in community surveys, in local financial problems, and in whatever area the people consider the major educational problems of the community to be.

The National Congress of Parents and Teachers. The National Congress of Parents and Teachers is another organization which helps promote better public relations. Working through the various state organizations and local units known as the PTA, it has, since its origin, had as its chief aim the promotion of child welfare and greater co-operation between the home and the school.

Origin. The National Congress of Parents and Teachers is an outgrowth of a movement to secure greater cooperation between the home and the school. The first organized attempt resulted in the creation of the National Congress of Mothers in 1897, which was a forerunner of the present organization set up in 1924. Many factors gave impetus to this movement, the chief ones being:

1. Recognition of the lack of and need for greater cooperation between the home and the school.
2. The increased school enrollment.
3. Increased school costs.
4. The need for adult education.
5. The need for child welfare.
6. Changing aims, curriculum, and methods of the school.
7. A changed view concerning home study.
8. An increasing amount of democratic practices in school administration, which calls for participation, cooperation, and group planning rather than dogmatic and autocratic methods.

Local congress parent-teacher associations. The functioning units of the national (and state) Congress of Parents and Teachers are

known as local congress units.³ The national and state organizations assist the local units by providing basic procedures and methods, suggesting activities and projects, and organizing study groups. Unity of effort, which might otherwise be sporadic, conflicting, and ineffective, is secured in this manner.

Objects of parent-teacher associations. The general objectives or objects of the parent-teacher associations are common to all local units, thus assuring that all will work toward the same goals. The objects, as stated in "The Parent-Teacher Manual," are:

1. To promote the welfare of children and youth in home, school, church, and community.
2. To raise the standards of home life.
3. To secure adequate laws for the care and protection of children and youth.
4. To bring into closer relation the home and the school that parents and teachers may cooperate intelligently in the training of the child.
5. To develop between educators and the general public such united efforts as will secure for every child the highest advantages in physical, mental, social, and spiritual education.

The organization has a threefold purpose: "to know the child through child study and parent education; to cooperate with the schools and other educational agencies in his training through shared participation with teachers and educators; and to control and build his environment through the development of public opinion and civic activity."

In policy, the organization is noncommercial, nonsectarian, nonpartisan, has no membership in other organizations, and anyone interested in child welfare may become a member.

Specific objectives of local congress units. The specific objectives of local congress units are guides for determining the activities for achieving the general objectives. Although the general aims are the same for all units, the specific objectives may vary according to the local situation, immediate needs, and interests. These will not only vary for different local units but will also change from year to year in a given community. As one goal is reached, others are established.

³ This and the following information was secured from "The Parent-Teacher Manual" and pamphlets published by the National Congress of Parents and Teachers, Washington, D.C.

Some of the objectives are continuing; that is, they represent continuous activities such as keeping the parents informed of the work of the school. Some specific objectives which have been accepted by many local units and which reveal the types of activities in which they engage are:

1. A knowledge of the aims, purposes, and objects of the National Congress of Parents and Teachers.
2. An understanding of the broadened concept of education and the importance of cooperative efforts of all agencies contributing to the educational development of a child.
3. An understanding of educational and social forces and how these affect parents, teachers, and children.
4. An appreciation of the place of organized, cooperative effort in modern social life and of the importance of organized parents and teachers in community life.
5. An appreciation of human relationships and how such relationships are promoted.

The usual objectives of parent-teacher associations are:

1. To give members a better understanding of the objectives and methods of the school.
2. To learn to apply accepted educational objectives and methods to the out-of-school environment.
3. Under certain conditions to give school officials suggestions as to reasons why the school fails or succeeds.
4. To aid in educating the community in desirable aspects of the school's program.
5. To facilitate acquaintance among parents and teachers.
6. To raise funds under certain conditions.

Activities of parent-teacher associations. The two main types of activities of local units are conducted through general meetings and through study groups. A few typical program topics for general meetings are:

1. Securing better relationships between the home and the school.
2. Improving community health.
3. Curriculum changes for modern living.
4. Educational trends.
5. Guidance of youth in a modern world.

6. Home and school as centers of culture.
7. Juvenile protection in the community.
8. Legislation affecting children and youth.
9. Safety in the home, school, and community.
10. Social and mental hygiene.

Many study-group topics have been suggested by the National Congress of Parents and Teachers, which is able to supply reading materials to local unit groups. Some suggested topics are:

1. A study of the adolescent.
2. Child legislation.
3. Juvenile protection.
4. Parent education.
5. Vocational education.
6. Youth and home problems.

The lists of suggested program and study-group topics should be modified and changed to meet local conditions and needs. Over and above these, the organizations may work on short- or long-term projects, such as improving the school library, establishing playgrounds, serving hot lunches, beautifying the school grounds, and raising money to purchase needed equipment for the school.

Agencies and mediums of school publicity. The greatest single agency of school publicity is the pupil. If each one is adjusted to the school environment, the publicity will be favorable, but if he is not, he will easily find something to criticize. The greatest and best publicity for any school is a group of happy, well-adjusted pupils. Much time has been wasted in some schools trying to explain why pupils are not adjusted rather than in revamping the school so they will be.

Some specific agencies of school publicity are:

The Report Card. The report card is the most frequent form of written publicity which goes to the homes. Many forms, types, and varieties are employed in different schools, the most common being a listing of courses and marks earned, expressed in either letters or percentages, and in addition a rating on deportment and often a rating on personality. Trends are to substitute or supplement this type with informal notes to parents stating the weak and strong points of each pupil, or to use a three-point marking system: superior, passing, and needed improvement. The latter is being substituted for "F" meaning

“failure.” When “needed improvement” is reported, it may be followed with a note indicating in what respects the improvement is needed with an invitation for the parents to cooperate in an effort to bring about improvement.

The School Paper. The school paper, if written by the pupils, is always a source of interest to pupils of the school, the teachers, and the local public. Students may be aided in securing materials for publicity through the National Citizens Commission, the National Congress of Parents and Teachers, and the National Education Association. A good time to arouse increased interest in schools is during American Education Week, which occurs each fall and is sponsored by the National Education Association and the American Legion. The *Journal* of the N.E.A. publishes a program which may be followed in all schools and by related groups during the week.

Commencement Programs and Other Means. The commencement season is an excellent time to present to the parents many important features of the school. Pupils or outside speakers or both may take part. A summary of the year’s work and needs for the future may be presented during this program.

Other methods which may be employed are school exhibits, demonstrations, parents’ day, athletic events, plays, operettas, and entertainments. In employing these mediums for purposes of school publicity, entertainment should be made secondary to the message which is to be given patrons.

Public Communications. Increasingly, educators are employing a greater variety of mediums in their public-relations program, and a larger number of techniques. Local papers are being given more news for publication, and the articles are of greater interest to the public; radio programs are being used, and in many communities the local station furnishes free of charge time for announcements concerning schools. Educators are working more with civic and church groups, and, more recently, channels have been set aside on TV for educational purposes.

Educational TV Channels. Recognizing the possibilities of TV as an educational agency, educators requested and the Federal Communications Commission reserved 242 TV channels for educational, rather than commercial, purposes. If these permits are not applied for by a certain date, they may not be reserved. Many universities and public-

school groups have already applied, but a large number may never do so, even though they are in favor of the idea, for the cost is great.

TV may be used to supplement instruction on the secondary, higher, and adult levels of those now in school on a full-time basis, those taking evening and night classes, and especially those enrolled in home-study courses. It would especially aid those who, for physical reasons, could not attend classes on the campus. In addition it may be used by county agriculture agents and home demonstration agents. At Western Reserve University, a few home-study courses have been given since 1951 over TV. Students enroll and take the final examinations on the campus; study and "class attendance" are done at home by viewing the TV. This is in the experimental stage, but evaluations have been favorable.⁴

The major problems involved in using television as a means of communication are three:

1. The cost of establishing a TV broadcasting channel is greater than many communities and schools can afford. This problem is magnified in rural areas, for the range of each station is limited and the audience reached by each would be small.
2. The cost of operation must be paid by the institution or educational group rather than by commercial agencies.
3. The difficulty of providing suitable and worthwhile educational programs constitutes a continuing task. If educational programs of interest to the public are not prepared and presented in a professional manner, the project will not be successful.

If the educational TV channels are not all applied for, this will not prevent educators from using the commercial channels. In fact, many believe this is the better method, for they may be employed from time to time when needed rather than educators having the responsibility for a continuous program, which might suffer because of lack of talent, lack of variety in the programs, or lack of adequate preparation.⁵

Public-relations services. A few years ago, anyone concerned with school public relations had to fumble along on his own. Today, through

⁴ TV Thaw Starts Second Gold Rush, *Radio and Television News*, 47 (June, 1952), pp. 16-17.

⁵ John F. White, TV or Not TV? *National Education Association Journal*, 42 (January, 1953), p. 34.

the National School Public Relations Association more than 5,000 members of the profession are organized to share their ideas in public relations. The members are staff members of the association who are assigned to full-time public-relations responsibilities in city and county systems, state departments of education, and state and local education associations. Others are school superintendents, board members, association leaders, college professors, principals, and classroom teachers.

Through publications such as "Trends" and "It Starts in the Classroom" (newsletter), members are kept up-to-date on significant school public-relations developments through press, radio, television, campaigns, community cooperation, and other mediums. Copies of leaflets, reports, and campaign materials described in these are exchanged by members.

Other publications of the organization which are of great value and at the same time inexpensive are "Print It Right," a 48-page handbook on the writing, design, production, and distribution of printed communications for school systems and educational associations; "The Teacher and Public Relations," "Teaming up for Public Relations," "Public Relations Packet," and other special-service publications in the form of books, leaflets, and pamphlets.⁶

ACHIEVING THE PURPOSES OF THE PUBLIC-RELATIONS PROGRAM

As a basis for all public-relations programs, a survey of the community and its schools should be in continuous process in order to secure factual information. The survey should be extended to include information beyond the limits of the community, such as national, state, and county information needed in the solution of educational problems. From this survey, needs should be determined and the information secured which is to be imparted and used to solve problems and to help create mutual understandings.

Suggestions pertaining to the types of information needed in meeting the objectives of the program are presented. All these objectives should be the aims of all public-relations programs in any community, for they are continuing rather than temporary and all communities

⁶ All these are distributed by the National School Public Relations Association of the N.E.A., Washington, D.C.

have some common problems. They will vary in emphasis from time to time and from place to place, but all are present to some degree at some time.

Building favorable public opinion toward the continuous support of public schools. To provide secondary education for all youth who desire to attend is a goal which cannot be attained save by providing money through taxation. There is no other source. From a financial viewpoint, the goals are to provide equal educational opportunities and to equalize or distribute the costs so that each taxpayer bears an equitable portion.

In order to achieve this goal of continuous support, the general public should be informed about the school's program and what it costs each taxpayer. If the parents have helped determine the program and have had a voice in making the policies of the school, it will not be necessary to have a campaign aimed directly toward securing needed revenue. The educational program is what should be emphasized, rather than costs, which will prevent many persons from passing judgment on education by looking at the cost alone.

Each local school district should determine the best way to finance its schools, because there are great differences among the districts and the states in their abilities to support education. In order to help equalize educational opportunities, states are increasing their aid to local districts, although the majority of all support comes from local taxes, the average for the United States being 55 per cent in 1949-50. The state governments provide 43 per cent and the Federal, 2 per cent.⁷

The need for adequate school support is greater now than ever before. The public has given the schools greater tasks and is demanding more returns but has lagged behind in giving financial support to accomplish these. The educational program costs more than it did in the past. Some of the reasons are:

1. The school term has increased.
2. Better and more facilities are being secured.
3. More services are rendered pupils, such as lunches, transportation, libraries, and health services.
4. Teachers need higher salaries.
5. The cost of materials and services has increased.
6. The value of the dollar has decreased.

⁷ Data secured from the U.S. Office of Education, 1953.

Keeping the citizens and teachers conscious of the fact that schools need to be constantly reappraised. Appraising the public schools is a process of evaluating them in the light of their accomplishments or the extent to which they have made progress in achieving their goals. Since goals are constantly being restated and since methods and curricula are changed to meet them, this process needs to be continued at all times. If educators and parents relax for only a brief time, the schools will suffer. One phase of the public-relations program, then, is to keep all persons concerned conscious of the fact that appraisal is needed.

Appraisal is not confined to educators alone. The parents have a right and a duty to aid in it. Teachers should not take the attitude that since the responsibility of carrying out the educational objectives is theirs, the privilege of appraisal is also theirs. The aims of the school are the aims of society, and therefore the public should have the right to judge the extent to which they are being achieved and the methods employed in achieving them. This does not mean that parents should have professional knowledge or skills, or that they should pass judgment on technical aspects of the school; their part is in the general areas of accomplishment and operation. A simple analogy may clarify this relationship. A person may know that his automobile is not operating correctly but not know what is wrong with it. Determining the cause and repairing it is the work of the trained mechanic. This is comparable to parents and teachers with respect to the schools.

Coordinating all educational agencies of the community. The school as the major educational agency should lead in coordinating the other educational agencies of the community. The others, such as civic clubs, churches, youth organizations, and informal agencies such as motion pictures, radio, TV, newspapers, and magazines, exercise an influence on youth often as great as or even greater than the schools. In many cases, however, the influence is contrary to that of the schools. These agencies need to be coordinated.

The implications of these conditions call for a greater amount of planning, guiding, and directing of the informal agencies, which require cooperation between them and the schools, for otherwise there will be conflicts. These conflicts will result in rendering ineffective the work of the school and will cause learning to proceed along undesirable paths, with ultimate results of misunderstandings between

parents and the school, waste, and inefficiency. Most important of all, they produce youth who are not prepared to live harmoniously in society.

Arousing interest and the will to improve schools. Frequently, parents, teachers, and the general public are aware that improvement is needed in some aspect of the school, such as new buildings, a reorganization of the taxing system, the planning of curriculum, the expansion of playgrounds, the extension of school terms, or other modifications. The community may talk about these needs for years. They may be discussed in small groups and editorials may be written about them without any action about the problems and needs.

To change these desires and verbal expressions into actions is one of the major purposes of the public-relations program. Getting people to want to change and showing them where improvement is needed are important activities; but getting them to act is a difficult, but necessary and final step. Verbal enthusiasm is quite common and easily aroused; to change it into action is difficult, but only through this final step can progress be made.⁸

Cooperating in formulating policies of the school. School leaders are often accused of formulating policies and then attempting to secure support for them through a public-relations program. If this is done, there is cause for criticism, for, in democratic school administration, concerted and united efforts of all persons concerned are invited in formulating policies. Policies cannot be formulated through mass meetings. They are guiding principles which regulate future conduct and can be well formulated only after careful study extending over a period of time during which all persons concerned or interested have an opportunity to be heard. Before policies are finally accepted, they should be approved by the school faculty, the board of education, and the citizens' committee and then presented and explained to the public with the facts which determined the wisdom or the expediency of accepting such guiding principles. The public should be given a right to criticize before policies become final. If this process is followed, the community does not have to be sold on the policies, for it helped make them.

Once a policy is accepted, it should not be reconsidered unless new

⁸ See "Citizens and Educational Policies," Educational Policies Commission, National Education Association, Washington, D.C., 1951.

evidence is presented, for it is assumed that it was formulated only after due deliberation and a reconsideration of the same facts would be a waste of time.

Winning friends for schools. Each teacher is, or should be, an ambassador of good will in winning friends for the public schools. What parents and other citizens think and believe about their schools is usually what they think about the teachers. These impressions are formed during formal and informal contacts with them in the community while engaged in church, civic, and social activities and contacts in the PTA or while visiting schools. An additional and perhaps even a greater factor is the impression created through the pupils.

Enemies of the public schools use criticisms of the schools made by teachers as ammunition for their critical guns. Teachers have a right to criticize the schools, but they should refrain from doing so in public or in places where others will misunderstand the intent of the remarks.

A score card for determining a teacher's PR (public-relations) score was prepared and used in the Grand Rapids school system. Some of the items are:⁹

Do you—

1. Walk through the school halls as if you are glad to be there?
2. Greet your townspeople with warm friendliness?
3. Give a lift to youngsters by means of a smile or a "hi"?
4. Show appreciation of the good work of other teachers?
5. Smile when you excuse Jane to work on a committee, or John to rehearse a play?
6. Keep confidential what you learn in interviews with parents?
7. Show interest in the home and outside interests of pupils?
8. Make parents feel welcome in your classroom?
9. Enthusiastically urge capable youth to train for your profession?
10. Explain "the ropes" to new teachers and help them to make distinctive contributions?

If you can check "yes" to most of these items, then you have a high IQ in PR.

Protecting schools against unjust attacks. There are enemies of public secondary schools who exist in sufficient number and have

⁹ "It Starts in the Classroom," special ed., Public Relations Newsletter for Classroom Teachers, National School Public Relations Association, National Education Association, Washington, D.C., August, 1952.

enough influence to make themselves effective. Some claim that the best way to destroy their influence is to ignore them, but this is not the answer. The attacks made are unjust. They distort the facts; make use of misleading propaganda; capitalize on disgruntled citizens who through misunderstandings are criticizing schools; and in other ways are undermining the structure of public education.¹⁰

Their motives for attacking schools are many, and opponents may be grouped according to their motives.

1. There are those who oppose higher taxes for schools. Often they do not resist the taxes directly but attack the school features which cost most. For example, they argue for a shorter school term and a longer school day; larger classes; suspension of automatic salary increases; a reduction of the elementary school from eight to seven years and the secondary from four to three years; discontinuance of various services such as free textbooks, libraries, transportation, school lunches, and health services; and especially they attack the school's activity program. They use devices, as name calling, talk of wasted time, loafing, frills and fads, and tell about how much better schools were when they were young and how much less they cost in those days.

2. Others are opposed to change. They fear change, cannot understand it, and feel insecure when any is made. Their attacks then are on any innovations made. They constantly compare present with past methods and always favor the older ones. One main attack is that fundamentals are being neglected, for they visualize learning only as a process in which pupils are sitting stiffly in their seats with "books in hand." They also believe that certain topics or subjects are not being taught if they fail to find the subject listed in the curricular offerings.

3. Some are opposed to democratic methods. They, being autocrats themselves, want autocracy in the school system. They attack electives, free activity periods, child-community-centered curricula, and the apparent lack of discipline because they do not see evidence of restraint but notice students being active rather than passive.

In addition to those who are enemies of the public schools, there are a larger number who are dissatisfied with schools and who constitute a potential source of enemies. In a survey made in the Baltimore, Md., schools, it was found that 9 out of 10 parents approved or were

¹⁰ Theodore Brameld, ed., "The Battle for Free Schools," pp. 13-20, The Beacon Press, Boston, 1951.

either fairly or well satisfied with them.¹¹ Many of those expressing dissatisfaction did so because they recognized many needed changes or improvements, such as new buildings, increased teachers' salaries, and reduced size of classes, and cannot be classed as enemies but as friends who want to see improvements. Teachers must learn to recognize the difference between true enemies of schools and those who are trying to improve them by pointing out some of their shortcomings. However, if better public relations is not practiced, some of the latter may become true enemies.

Helping all realize the value of public schools in a democracy. This is not an easy task, for the outcomes of instruction are not very tangible or obvious. Occasionally, pupil growth influenced or produced through the stimulation of a high-school environment can be observed directly, but generally speaking years are required before the complete outcomes of instruction have evidenced themselves in some observable form of activity, and then it is difficult to differentiate the relative effectiveness of the formal and informal educational agencies. Other professional groups do not find it so difficult to demonstrate results; a doctor heals a patient, and achievement speaks for itself. Teachers must employ entirely different techniques. Society is referring more and more of its problems to the school, lending little cooperation in their solution, and often criticizes the results or the lack of results produced.

Interpreting the educational program to laymen. Often parents do not know or fail to realize that schools are not what they were when they went to school, that they are much larger and more complex; that the services they perform are far greater; that the methods used are different and based on years of research and study; that the curriculum is broader; that the number of activities under the direction of the school is greater; and that the aims have changed in emphasis.¹²

This expanded, complex program must be interpreted to the public. Modern methods and objectives must be explained, and the parents must be taught to appreciate the professional skills needed by teachers in secondary schools. Information must be presented to parents on how

¹¹ *Baltimore Bulletin of Education*, 30 (September-October, 1952), pp. 3-15.

¹² "It Starts in the Classroom," National School Public Relations Association, National Education Association, Washington, D.C., and the filmstrip, "The Teacher and Public Relations," which accompanies the bulletin.

we teach, why we teach what we do, report cards, homework assignments, co-curricular activities, religious conflicts, stress on fundamentals, and the school's marking system and promotional practices. If policies are needed in guiding practices in any of these phases of the school's program, they should be formulated in the manner previously described.

Furnishing the public with information about the schools. Some school activities should be given publicity because they are what the parents want to know about the school; and others, because they are what they should know about the school.

There is some disagreement between what parents want to know about the school and what newspaper editors sometimes think they want to know. A tabulation of the types of school news printed in local papers shows that extracurricular activities, especially athletics, are given more space than any other type. At the same time, parents are more interested in pupil achievement and pupil progress, methods of instruction, health, courses of study, and the value of education than in extra activities, parent-teacher associations, and boards of education.

Some of the information about which parents should be informed includes:

1. The purposes, aims, and objectives of the high school.
2. The objectives and purposes of each subject in the curriculum.
3. The reasons why school costs are increasing.
4. Reasons why the curriculum needs modifying.
5. Explanation of modern trends in organization and presentation of subject matter.
6. Value and interpretation of a testing program.
7. Functioning of the educational and vocational-guidance program.
8. Parent-school relationships with respect to home study, commercialized amusements, school clubs, and out-of-school activities.
9. A description of the services performed by the schools for pupils, such as transportation, lunches, libraries, and health services.
10. Special projects in the various classes, such as the study of city government or the tax-assessing methods in the community.

With respect to these and other phases of the school's program, it is not uncommon for the school to receive adverse criticism because of misunderstanding. The greatest single agency of school publicity

is the pupils of the school, and frequently their accounts are not entirely accurate. Aside from cases of deliberate falsification, they either omit certain vital information or do not see the situation from the same point of view as the school officials and teachers. Giving publicity to these and to other phases of the school's program will prevent these misunderstandings.

GENERAL PRINCIPLES OF SCHOOL PUBLIC RELATIONS

From the discussion of the public-relations program, the following general principles may be derived:

1. The public-relations program should be well organized and planned to include the services and activities of all persons: teachers, pupils, and parents. The organization should not be complex.
2. A wide variety of mediums and communications channels and school activities should be employed in the program. The services of the N.E.A. and its departments should be used.
3. The program should be continuous, honest, objective, comprehensive and should be based on a study of the community.
4. The program should aim to reach all persons concerned with the school's program.
5. Every school should organize a parent-teacher association, or citizens' committee, or both. All teachers should work in or cooperate with these organizations.
6. The schools should cooperate with civic and community organizations.
7. Every teacher should be aware that his speech, conduct, and manner have an influence on what the public opinion of schools is; therefore, all should conduct themselves so as to build friends for the school, should criticize the school only in a constructive manner and in the proper places—never in public—and all should take part in community activities.
8. Schools should be supported by a defensible financial program based on the needs of youth and the ability to pay. Through the public-relations program, attempts should be made to attain this goal.
9. The schools should recognize the role of citizens in the formulation of all policies. The schools belong to all people; therefore they have a right to control policies. At the same time, since technical skills and professional knowledge are necessary in carrying out the policies, this job should be delegated to and remain with the school administrators and teachers.

10. The professional staff converts certain goals of society into the school program. The community determines the goals; schools aid in achieving them.
11. Greater stress should be placed on citizenship development in the schools, for it is through this service that the schools have the best opportunity for good public relations.

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ISSUES AND TRENDS IN SECONDARY EDUCATION

There are many types and varieties of high schools in the United States. They differ in organization, administration, curricula, aims, and functions. This variety is desirable, for varying practices provide an opportunity to determine by means of comparison and contrast the best type of institution. That which meets the needs and situations of one locality does not necessarily meet the needs of another.

Recently there has been much experimenting in secondary schools, especially in curriculum planning, in the introduction of new subjects, in methods of teaching and methods of evaluating procedures. Often there are conflicting views on proposed changes, particularly those dealing with curricula. Some of these conflicts have become major issues. Schools cannot be closed while these issues are being resolved. The instruction of youth must continue. Changes must proceed slowly and cautiously, and of necessity practice must lag behind theory, for it is theory which determines the direction of practice.

ISSUES OF SECONDARY EDUCATION

Many problems and issues concern the aims, functions, and purposes of the high school. Ten of these issues were selected by the Committee on the Orientation of Secondary Education of the Department of Secondary School Principals of the National Education Association as a basis for discussion in group meetings of high-school teachers of the nation. The issues are:

1. Shall secondary education be provided at public expense for all normal individuals or for only a limited number?
2. Shall secondary education seek to retain all pupils in school as long

as they wish to remain, or shall it transfer them to other agencies under educational supervision when, in the judgment of the school authorities, these agencies promise to serve better the pupils' immediate and probable future needs?

3. Shall secondary education be concerned only with the welfare and progress of the individual, or with these only as they promise to contribute to the welfare and progress of society?

4. Shall secondary education provide a common curriculum for all, or differentiated offerings?

5. Shall secondary education include vocational training, or shall it be restricted to general education?

6. Shall secondary education be primarily directed toward preparation for advanced studies, or shall it be primarily concerned with the value of its own courses, regardless of a student's future academic career?

7. Shall secondary education accept conventional school subjects as fundamental categories under which school experiences shall be classified and presented to students, or shall it arrange and present experiences in fundamental categories directly related to the performance of such functions of secondary schools in a democracy as increasing the ability and the desire better to meet sociocivic, economic, health, leisure-time, vocational, and preprofessional problems and situations?

8. Shall secondary education present merely organized knowledge, or shall it also assume responsibility for attitudes and ideals?

9. Shall secondary education seek merely the adjustment of students to prevailing social ideals, or shall it seek the reconstruction of society?

10. Granting that education is a "gradual, continuous, unitary process," shall secondary education be presented merely as a phase of such a process, or shall it be organized as a distinct but closely articulated part of the entire educational program, with peculiarly emphasized functions of its own?

The majority of these questions have been answered either directly or indirectly in the previous chapters. The view taken by the authors on these questions might be summarized by brief answers. It must be kept in mind that these answers are not complete. Many of the questions cannot be answered categorically, for a greater freedom of statement must be permitted in order that one's position may be understood.

1. Secondary education should be provided at public expense for all normal individuals.

2. Secondary education should seek to retain all pupils as long as they can remain in school.

3. Secondary education should be concerned with the development of an adolescent as an individual personality. At the same time, the welfare of society should be considered to the extent that the individual contributes to that welfare and cooperates with others for its advancement.

4. Secondary education should provide a common or general curriculum for all youth and in addition to this provide a number of electives of an academic and vocational nature to provide for special interests.

5. Secondary education should provide for a general background for all vocations rather than attempting to provide special training for certain specific or particular vocations. All subjects in the curriculum should have values sufficient to justify them on bases other than vocational.

6. Secondary education should be concerned primarily with the value of its own courses without regard for the pupil's future academic career.

7. The secondary school should arrange and present experiences in fundamental categories which are directly related to the purposes of the secondary school in a democracy, such as increasing the ability and the desire to meet sociocivic, economic, leisure-time, vocational, and home- and community-life problems and situations.

8. Secondary education is concerned not only with the presentation of organized knowledge but also with the acquisition of habits and skills and with the development of desirable attitudes, ideals, and appreciations.

9. Secondary education should be concerned not only with the adjustment of the individual to society but also with the reconstruction of society. It should cooperate with the community in the solution of problems.

10. Secondary education should be organized as a distinct but closely articulated part of the entire educational program. The boundaries of secondary education should be distinct enough so that within them its peculiar functions may be recognized and indistinct enough so that there will be no gaps or abrupt changes as one progresses from one stage of the school system to that of another.

Should scholarship be stressed more in the secondary school? One of the criticisms often advanced against the high school is that scholarship is not stressed enough. Some claim that the standards are being lowered in order that the masses may receive passing marks, be promoted, and graduate. Many of those who make this criticism are not well informed about the aims of the high school. They believe it should produce scientists, or artists, or mechanics. This is not its purpose.

Before the high school expanded to include all youth who desired

to attend, scholarship of a more rigid type could be maintained. When standards were pitched for the select few, they could be higher. When the school first started to include those of less ability, teachers deliberately excluded many of them if they could not profit by the type of curriculum then in vogue, that is, an academic, classical curriculum. Since then, changes have been made so that they can profit. When the more intelligent pupils pursue the same courses as the less capable, they do not have to work so hard as they formerly did in order to make passing marks. The remedy does not lie either in pupil selection or in reverting to a more academic type of curriculum. The solution is to be found in methods of teaching. When pupils of varying abilities are found in the same class, the course should be enriched for those of higher abilities rather than the teacher permitting them to use their superior ability to make passing marks by doing less work. If the school is large enough to offer many electives, the more capable pupils should be encouraged to enroll in courses in which the group will be so select that scholarship may be stressed.

The pupils of the American high school have often been compared with those who have finished secondary schools of Europe. In scholarship, the pupils of Europe excel those of the United States. There are several factors causing this superiority:

1. European schools are more selective than those in the United States.
2. Scholarship is stressed more in European schools.
3. The secondary-school period is longer in most European schools than in the United States. There is a difference in the quality of work and the ground covered, so that French or German pupils have studied many subjects for six to eight years, while those in the United States have studied the same subjects only one to four years.
4. The school term is longer in Europe than in the United States.
5. Methods of teaching are different.
6. Standards in Europe are higher, and competition is keener, motivated by examinations.
7. The European teacher is better prepared and trained.
8. More emphasis is placed on languages in European schools—the basis often used in making comparisons.

Should co-curricular activities be required of all students? Co-curricular activities further the same aims and values as curricular activities and are usually selected on the same bases. They enrich the cur-

riculum, provide opportunities for putting into practice many concepts and principles studied in the regular curriculum, and meet some basic needs which are not provided for in the required general-education courses or in the special-interests courses. Since they have these values, many believe that a certain number of activities should be required of all students. If they were required, the question of how many or how much would have to be answered.

Should credit be given for participating in co-curricular activities?

Giving credit for co-curricular activities is a step toward incorporating them into the regular curriculum. Credit would provide a partial incentive for participating in activities, would aid in regulating the amount of participation, and provide a record of activities to aid in preventing some pupils from engaging in too many activities and others avoiding them.

If credit is given, other problems are encountered: Would the credit count toward graduation? If so, how much would it count? A point system would have to be employed for assigning a value to each activity in which a pupil participated.

One of the objections to requiring or giving credit in activities is that this might tend to formalize them, causing students to view them in the same manner as curricular activities. This might result in students' losing interest in activities or in teacher domination of them.

Should youth be indoctrinated with principles of democracy? Recently, because of the conflicts which seem to be centered between totalitarian states and the democracies, some educational leaders are advocating that the high school be used as an instrument for indoctrinating youth with the principles of democracy. Some of these principles are freedom of speech, freedom of the press, and government by the consent of the majority.

There is no virtue in the belief that the opinion of the majority or collective opinion and judgment is good merely because it represents the judgment of many rather than a few. Mass opinion is no better than the opinions of the individuals composing the mass. Therefore, democracy, meaning majority rule, can be practiced and can advance only as the individuals composing the masses are educated. The implication calls for universal secondary education if the United States is to preserve and maintain democracy. But to teach it by indoctrination will defeat its own purpose. Rather, if universal secondary education

is achieved and the school is made democratic in outlook, program, and practice, democracy will be inevitable and pupils will be trained for functional citizenship.¹

Should the state give more aid to capable youth who are financially unable to provide themselves with secondary and higher education? There are many youth who cannot avail themselves of a secondary education because no school is accessible unless they board away from home or pay tuition or the cost of transportation, or both; many who start school must drop out before graduation mainly because of their economic condition. There are many young people intellectually capable of doing college work who are not enrolled. The main reason for nonattendance is lack of funds. To what extent should the government aid these youths as individuals rather than give them indirect aid by supporting the entire school system? It is a loss to society if they are not trained to the fullest extent of their capabilities. There are those who argue that, if they have the ability, in this day and age they can get an education through formal schools if they want it. This is not entirely true. Many find it impossible without aid.

Several European countries have recognized that ability and money do not always occur together, that it is a loss to society if capable youth are not trained, and are providing for such youth.

The Federal government is aiding veterans in both secondary schools and colleges. Recommendations have been made that a system of scholarships for colleges be established in keeping with the precedent established by the G.I. Bill. Since a secondary education is basic to higher education, some form of aid should be provided on the secondary level. The President's Commission on Higher Education recommended not only scholarships for the senior-college and graduate-school students but also financial assistance to competent students in grades 10 through 14 if they could not continue their education without such assistance.

Should religious instruction be given in secondary schools? One of the issues pertaining to secondary education is: Shall religious instruction be given in the public high schools? There has been a vigorous and determined effort to make this a part of the secondary-school curriculum. The arguments advanced center about the lack of high ethical

¹ See A. J. Oliver, *Dare We Educate for Democracy?* *Educational Forum*, 15 (November, 1950), pp. 15-23.

and moral standards among youth. As in the case of many other evils of society, many believe that the solution of the problem is to introduce religion in the schools as a corrective measure.

The real issue is not whether youth should receive religious instruction but, rather, whether the public schools should give such instruction. Although the inclusion of this subject might be in keeping with the aims of society, the following are some of the arguments advanced for not teaching religion in public schools:

1. The people of the United States have made it clear that they desire a separation of Church and state. To teach religion at public expense would bring the two together.
2. Public schools are populated with youth representing various denominations and faiths, and there is no body of religious subject matter common to all.
3. Denominationalism would inevitably be introduced, regardless of the care employed in selecting teachers. Although there are many who could teach religion in certain localities where the population is not so diversified with respect to religious faiths, the task of training an adequate number of teachers who could do this to staff the nation's schools would be impossible. This is one subject that must be well taught or not taught at all.
4. Parents, not educators, still reserve the right to decide what kind of religious instruction their children shall receive. If religion were taught in schools, even as an elective, the right would be partly or wholly taken from them.

The teaching of religion and the Bible can best be done through other agencies: church, home, and private schools. The schools make their contribution in a related and indirect manner, that is, by teaching ethical character, honesty, fair play, and high moral standards through the medium of literature, art, sports, dramatics, and school activities.

Several plans have been employed in giving religious instruction to youth, such as reading the Bible in schools, permitting church teachers to work in the public schools during school hours, and excusing pupils from the public schools to attend a weekday church school.

In March, 1948, the United States Supreme Court declared unconstitutional the plan of released time practiced at Champaign, Ill., whereby religious teachers went to public-school buildings for one

period a week to give instruction in religion. Pupils were grouped according to faith for this period.²

In April, 1952, the United States Supreme Court upheld New York's released-time program of religious instruction for public schools. This case differed from the McCollum case in that the instruction was not on school property; the school officials did not select instructors or supervise the teaching; and all costs were borne by the religious organizations.³

These objections and court decisions have not resolved the issue. Many leaders point out the fact that our people tend to be religious illiterates, often knowing little or nothing about the group to which they belong. They argue that the school should be able to teach something without advocating specific, detailed practices and that character and morality cannot be taught properly apart from religion.

A committee on religion and education appointed by the American Council on Education stated a number of principles concerning the teaching of religion in public schools which seem to be the nearest solution to the controversy. Some of these are:

1. Due recognition should be given religion, but separation of Church and state should be safeguarded.
2. The constitutional principle of religious liberty and the traditional separation of Church and state were not intended to exclude all study of religion from public schools.
3. Teaching a common core of religious beliefs or teaching moral and spiritual values cannot be regarded as adequate teaching of religion.
4. Denying religion or opposing it is a violation of religious liberty.

Remaining silent on religion as many schools do may leave the impression on youth that religion is not important and cannot lead youth to see the vital importance of it in our history and in our contemporary affairs.

A survey made by the American Council on Education found that the majority of educators agree on these principles; yet they vary

² This case is known as the "McCollum case," *National Education Association News*, 2 (March, 1948), p. 1.

³ News and Trends, *National Education Association Journal*, 41 (September, 1952), pp. 323-324.

⁴ "The Function of Public Schools in Dealing with Religion," pp. 2-3, American Council on Education, Washington, D.C., 1953.

considerably in putting them into practice. Schools fall into three categories concerning the teaching of religion:⁵

1. *Avoidance of Religion.* Those which avoid religion save through accidental or incidental treatment believe that to treat it further would violate the separation of Church and state. These, which are relatively few, do attempt to teach ethical character.

2. *Planned Religious Activities.* There are all degrees and varieties of planned religious activities. They include Bible reading, devotional exercises, prayers, religious songs, religious talks, religious programs near the times of Thanksgiving, Christmas, and Easter, grace before meals and prayers before athletic contests, sponsorships of religious clubs, credit for Bible study done outside the school, as well as a certain amount of incidental study or mention of religion in classrooms.

Most of our schools fall in this category. The extent to which they plan activities depends on the homogeneity of faiths in the local community and the religious backgrounds of the teachers.

3. *Actual Study of Religion.* Those schools which actually provide opportunity to study religion do so as a part of courses of study in English and the social studies, art, music, and other fields. The aims of such study are to develop religious literacy and an intelligent understanding of the role of religion in human affairs.

Should public funds be used to help support private and parochial schools? In several states, public funds have been used to aid private schools; in 4 states, textbooks are furnished to pupils who attend private schools; in 15 states transportation is provided for them.⁶

The Supreme Court of the United States sustained the right of New Jersey to extend transportation to pupils of private schools, and the Iowa Supreme Court ruled that it could not be done in that state. These decisions leave the issue undecided by the courts as far as a national policy is concerned.

In these cases, it is contended that the aid is being given to the pupil and not to the school. This contention, known as the "child-benefit theory," is really an evasion of the real issue involved.

Many of those engaged in private education are opposed to any public support, for financial aid is often accompanied by control. If

⁵ *Ibid.*, pp. 10-40.

⁶ The State and Sectarian Education, *Research Bulletin of the National Education Association*, 24 (February, 1946), p. 44.

this occurs, the private schools will have to relinquish much of the independence they now possess. In a democracy, private schools for those who desire types of training not given in public ones are not only desirable, but a necessary part of the educational system.

Should pupils be permitted to finish high school in less than four years? During the Second World War many high-school students who displayed unusual ability were permitted to enter college after completing only $3\frac{1}{2}$ years of high school. High-school diplomas were granted after these students had successfully completed one semester of college work. This practice was discontinued at the close of the war, but some believe that it should be retained in its present or in a modified form. Some pupils are capable of completing 16 units of work in less than 4 years by carrying five or six subjects a year.

Another question raised in connection with the same problem is, "Should pupils be permitted to graduate if they have completed 16 required units in fewer than eight semesters, or should all be required to remain in school for four years?" Studies show that students can succeed in college with less than four years of high-school work or with fewer than 16 units. The postwar trends have been toward requiring four years of schooling for all before a high-school diploma is granted. Social maturity and experiences needed for subsequent schooling cannot be acquired adequately merely by earning academic credits. Exceptions may be made in some cases for students who have exceptionally high ability and maturity and for whom the school cannot provide needed experiences. Before exceptions are made, it must also be determined at what level of schooling certain experiences will be of the greatest value.

Should a high-school principal be expected to recommend students for college admission? When high-school principals are forced to make recommendations for students for college entrance, they are often placed in an embarrassing position, especially in small communities. In large schools, they cannot become well enough acquainted with each student to make valid judgments. Likewise, they cannot become well enough acquainted with the many colleges and universities in the United States to make accurate predictions. The burden of determining admission should be placed on the admission officers of the institution to which candidates apply; the school can supply them with all available information which would help the institution make

a decision. This plan would place a greater responsibility on the colleges for the success of those they admit. High-school principals might make a prediction of probable success, but it should not carry the weight of a recommendation. A survey made by Carrothers revealed that 83 per cent of 430 educators endorsed these views.⁷

TRENDS IN SECONDARY EDUCATION

There is much wishful thinking in stating trends. Often they constitute what one wishes would happen rather than the direction the secondary schools are taking. Trends must be based upon present conditions as they are related to the past. Changes which have been in evidence for several decades are more reliable for making predictions than those which merely represent innovations of the last few years.

Extension of goals. The previous chapters have shown the extent to which the United States has achieved her goals in providing secondary education for all youth. In some states, the goals are far from being reached; in others, they have almost been attained; but as they are approached, goals are set higher. One of the chief characteristics of the high school is its rapidly changing character, which is one of the best indications of a dynamic school, which is essential to democracy.

The period of schooling is being extended for the majority of youth. This is evidenced in three ways:

1. The holding power to the twelfth grade is improving, which means that youth are remaining in school longer.⁸
2. Acceptance of public responsibility for some form of secondary education for 100 per cent of the eligible secondary-school populations.⁹
3. In two states, Washington and California, and in various sections of the nation, goals have been extended to post-high-school training for all youth. This post training is in higher institutions, junior colleges, voca-

⁷ George E. Carrothers, Should a High School Principal Be Expected to Recommend Students for College Admission? *North Central Association Quarterly*, 22 (January, 1948), pp. 291-293.

⁸ See previous chapters.

⁹ Payson Smith, Frank W. Wright, *et al.*, "Education in the Forty-eight States," p. 39, prepared for the Advisory Committee on Education, U.S. Government Printing Office, Washington, D.C., 1939.

tional and trade schools, and many educators are advocating some type of organized apprenticeship training beyond a general training in 12 grades of public school. Still other youth, after finishing a regular high-school course of a general nature, return for an additional year of training in vocational subjects.

There seems to be a definite trend to extend education in some form to all youth beyond the twelfth grade, making the fourteenth year the terminal point for all not going to senior college. This schooling may be in junior colleges, community colleges, liberal-arts colleges, or trade and vocational schools.

Trends in the secondary-school population. The secondary-school population increased more than forty times, or doubled every decade from 1880 to 1930. No school in the history of education has shown such rapid development. From 1930 to 1940, the enrollment increased about 40 per cent, bringing into the various types of high schools about 70 per cent of all youth of secondary-school age. During the period 1941 to 1945, the high-school enrollment decreased; from 1945 to 1955, it increased again. It is estimated that the potential secondary-school population will reach a maximum of about 11 million by 1960 and that 80 to 90 per cent of this group will attend high school.

The declining birth rate, which started affecting the elementary school from 1930 to 1934, started affecting the secondary school in 1941. The rapid increase in the birth rate during and immediately following the Second World War started affecting the high school (ninth grade) in 1954 and will continue to cause increased enrollments for several more years.

The secondary-school population is now almost a cross section of the general population, and the trends are toward a greater democratizing of the high school.

For years, the number of girls has exceeded the number of boys enrolled in high schools, but the trends are toward an equalizing of the two sexes, showing that the secondary schools are having an increased attraction for boys.

Trends in rural education. Trends are definitely toward the consolidation of small rural schools into larger ones and the transportation of youth to these centers.

States are giving direct aid to local schools by paying the tuition of nonresident pupils and transporting them to schools in other districts.

Slowly the small rural districts, which have been inhibiting the development of rural education, are being enlarged. Whether the county will be accepted as the optimum size of local school areas or some indefinite area as "trade centers" or "community centers" will become the leading type is a matter of speculation only. Many Southern states have organized on a county basis, but it can hardly be said that this is a trend restricted to secondary education.

The small and large high schools. From 1930 to 1952, the number of small high schools enrolling fewer than 100 pupils decreased from 60 to 30 per cent, showing a tendency to consolidate. This tendency is still evident.

Relatively few high schools are large. Although the number of large schools has increased recently, the largest ones (over 10,000) have decreased in size by diverting pupils to other schools.

Trends in reorganization. Since 1909, when the first high school reported that it had reorganized, the movement advanced steadily until 1930. The growth was pronounced between 1920 and 1930 but was slightly retarded from 1930 to 1934. In 1938, 38.7 per cent of all schools were reorganized, and in 1954 the percentage had increased to 57 per cent. Evidence indicates that there will be a continued growth of reorganized schools in the future.

The type to be expected in the future will be of the junior-senior type rather than separate junior and senior high schools. Undivided schools are the majority type, and they have increased more rapidly than the separate junior or senior high school.

The type of school of the future may be some organization which includes both the kindergarten and the junior college as a part of the public-school system.

Trends in curriculum reorganization. The trends in curriculum reorganization may be divided into three divisions: (1) selection, (2) organization, and (3) presentation of subject matter and experiences.

1. Selection of Subject Matter. A skeptical attitude toward the traditional subject-matter offerings has been evidenced for some time and appears to be continuing. Traditional values are no longer accepted as adequate evidence of the value of subject matter.

New units and experiences are being added to the curriculum to prepare youth for living in modern society.

The trends are away from abstract, impractical, formal content to social, practical, and applied content.

Fine and practical arts are being prescribed as experiences all schools should provide.

Social studies and applied science and mathematics are becoming more important, and foreign languages, abstract and formal science, and mathematics are losing ground.

2. *Organization of Subject Matter.* The organization of subject matter is toward a more functional basis. Subject-matter divisions are being ignored as it is being realized that life does not present problems in terms of subjects. Materials are being organized into units with a social center for presentation to pupils. Less emphasis is being placed upon textbooks and more on providing vital and challenging experiences in which all pupils are interested. Actual experiences in the community are replacing vicarious ones. Activities formerly known as extracurricular are now being integrated into the entire curriculum.

3. *Presentation of Subject Matter.* As contrasted with former methods of instruction, progressive methods of presentation of subject matter are more psychological than logical. This method is more individualized, relates activities to life situations, is more functional, and integrates all experiences into a unified whole. Although still few in number, core curricula are increasing in number. Pupils are being taught to think rather than become "quiz kids."

The schools are stressing life-adjustment problems for *all* youth, making the curriculum meet the needs of *all* pupils, and they are developing *all* sides of life.

Trends in vocational education. The trends are definitely toward a more extended general training for all youth before the period of any specialization and definite vocational decisions. Specific training in special trades at the expense of economic and social training of a general nature is being condemned by both educators and businessmen who have had experience with the vocational school's product. During the war emergency, the relative emphasis on general and vocational education became an issue, many believing that a practical type was more desirable. During the war, a more practical type of program was stressed as a means of getting us safely out of the conflict; but a liberal education will go further in keeping us out of any conflicts in the

future. Now that the situation is being viewed more rationally, there is a return to a general education.

Elective courses of a vocational nature are being offered mostly in the eleventh and twelfth grades, and only those which have values other than vocational are being retained.

Vocational subjects are being limited to the fields of business, home and industrial arts, and agriculture, and they are being organized and taught so that they will contribute to as many of the general aims of secondary education as possible. Emphasis in these subjects is being placed upon the exploratory and guidance values and the development of attitudes, ideals, and interests, rather than upon the development of specific skills through routine repetition and drill.

Trends in evaluating secondary schools. The evaluation of secondary education must be in terms of the growth and development of the pupils and the number of experiences they have had under the direction of the school, as measured by their reactions and changes in conduct, rather than a counting or tabulating of the physical equipment of the school plant. Pupils grow and develop only through those experiences to which they react; so, regardless of the potential environment of the pupil, it is his actual or experienced environment which is effective.

Therefore, the evaluation of a secondary school is being made not in terms of such features as the size of the library, but how much is it being used? Not in the amount of scientific equipment, but to what extent is it used for demonstrations and individual laboratory work and how many pupils use it? ¹⁰

Attempts are being made also to evaluate the less tangible outcomes of instruction, as attitudes, interests, ideals, and appreciations. This is being done by keeping a cumulative record of activities, books read, reports given, tests taken, scores made, excursions, and club, assembly, and dramatic and vocational experiences. These are supplementing, *not replacing*, the usual conventional methods of evaluating by measuring the physical equipment and testing on factual material. All are essential for a true evaluation.

¹⁰ What Is a Good High School? *Bulletin of the Department of Secondary School Principals of the National Education Association*, 30 (April, 1946), pp. 156-157.

Trends in teacher education. The majority of secondary-school teachers now have four years of training, or the equivalent, beyond the high school. There are definite tendencies to require four years at least beyond high school for all teachers, and a growing tendency to increase this period to five years or even more.

The type of training is characterized by:

1. Specialization in two teaching fields.
2. More general training to assure breadth in related fields or to develop a general cultural background.
3. Professional preparation for all teachers.

This pattern of training is essential for a teacher in an integrated curriculum, whether the integration is achieved through participation, cooperation, coordination, or unification. The time is past when a teacher need have a knowledge only of the field in which he is teaching. Likewise, a knowledge of the aims, purposes, principles, and philosophy of education and of the techniques of directing learning has established itself as fundamental in the preparation of teachers.

It has been said that "Elementary-school teachers were *trained* but not educated, and that secondary-school teachers were *educated* but not trained." As the high school became less selective, high-school teachers were required to learn more and better techniques in order to cause learning to proceed more rapidly with the less homogeneous group. A realization of the need of both subject-matter and professional training has tended to bring about a closer relation between the teachers of the two divisions.

Trends in financing secondary education. The percentage of the total amount of school revenue raised by local districts is being reduced, and the amount contributed by the state is being increased. The recommended sources of school revenue are Federal 10 per cent, local 30, and state 60. Trends during the period 1940 to 1955 indicate that states are proceeding toward this proportionate distribution. These changes are taking place also because the cost of education is increasing and because the state wishes to equalize educational opportunities and costs.

The Federal government is slowly beginning to assume a greater responsibility in the support of education. Appropriations through the George-Deen and the George-Barden Acts were far more than had

been appropriated previously. Efforts toward securing general Federal aid are becoming more concerted until it appears that it will be a reality in the future.

Education for national defense. During the period of preparation for national defense, the general public looked to the schools as the place to begin developing national unity and efficiency. The work of the secondary school was and still is fourfold:

1. To teach fundamental principles of reading, writing, and arithmetic, which are essential to vocational and civic efficiency.
2. To improve the health of youth.
3. To develop greater vocational efficiency.
4. To teach the principles of the American way of life in order to develop national unity, which is essential to the preservation of American democracy.

It has been demonstrated in the past that in times of war too many youth and adults are deficient in these respects. In former times, education has been neglected, as were all peacetime pursuits, during periods of national emergency; today the value of education is being realized and is considered an important factor in national defense. Youth are being encouraged to remain in school in order that the four aims just stated may be achieved.

With respect to the preservation of American democracy or the defense of the country, the secondary school is not the proper place or institution for military training; nor should the attitude be taken that each pupil is a prospective soldier, sailor, or aviator for the next war. Rather, each one should be considered a citizen who will live in a peaceful nation and help preserve that way of life. If educated for these things, he will be capable of defending the country and, if necessary, he can easily acquire specific skills to defend it by the use of force.

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